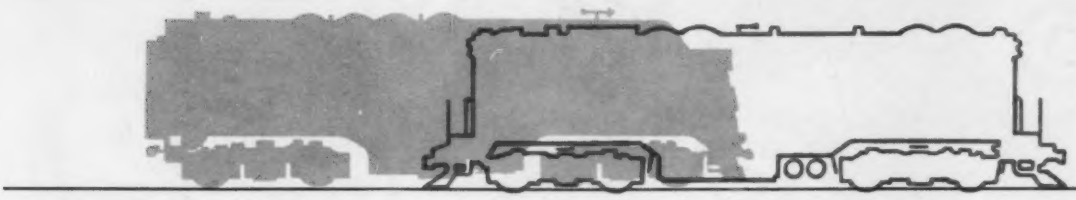
November 12, 1956

Dig Deep to Save Money . . . p. 33

RAILWAY AGE

THE INDUSTRY'S WEEKLY NEWSMAGAZINE

NEW LOCOMOTIVES FOR OLD . . .



How you can recover up to 34 per cent of the original cost of an FT on the purchase of a GP9

It's true! Here at Electro-Motive we take tired FT's and convert them—through our regular manufacturing facilities—to modern GP9's, allowing up to 34 per cent of the first cost of the FT on the conversion price.

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Already, many railroads are using this method to supply new power at substantial savings. And, by scheduling conversions in advance of need, these same roads stand to save thousands yearly by having power to meet growth conditions as they occur. Your Electro-Motive representative can give you exact cost details for converting an FT to GP9 or F9; E3, 6 or 7 to E9; or 201A switcher to an SW900.

To see how an FT becomes a GP9 - - pages 14, 15

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GENERAL MOTORS

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In Canada: General Motors Diesel, Ltd., London, Ontario

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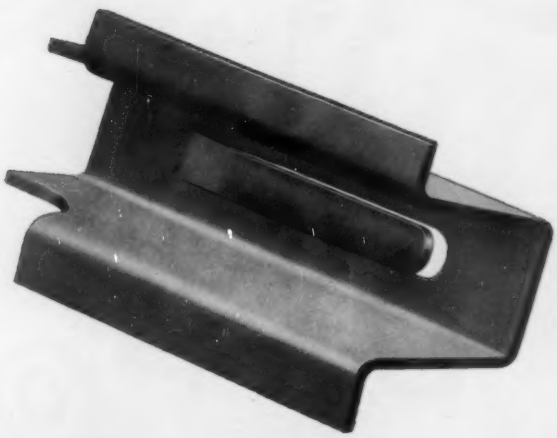
The trail leads right to Unit's new S-C Wear Plate — the SELF-CENTERING wear plate designed to cut brake shoe and wheel maintenance costs to the bone. Unit S-C Wear Plates keep your Unit brake beams centered at all times — prevent brake shoes from riding wheel flanges. Specify UNIT S-C Wear Plates on your next order — and watch those savings pile up.



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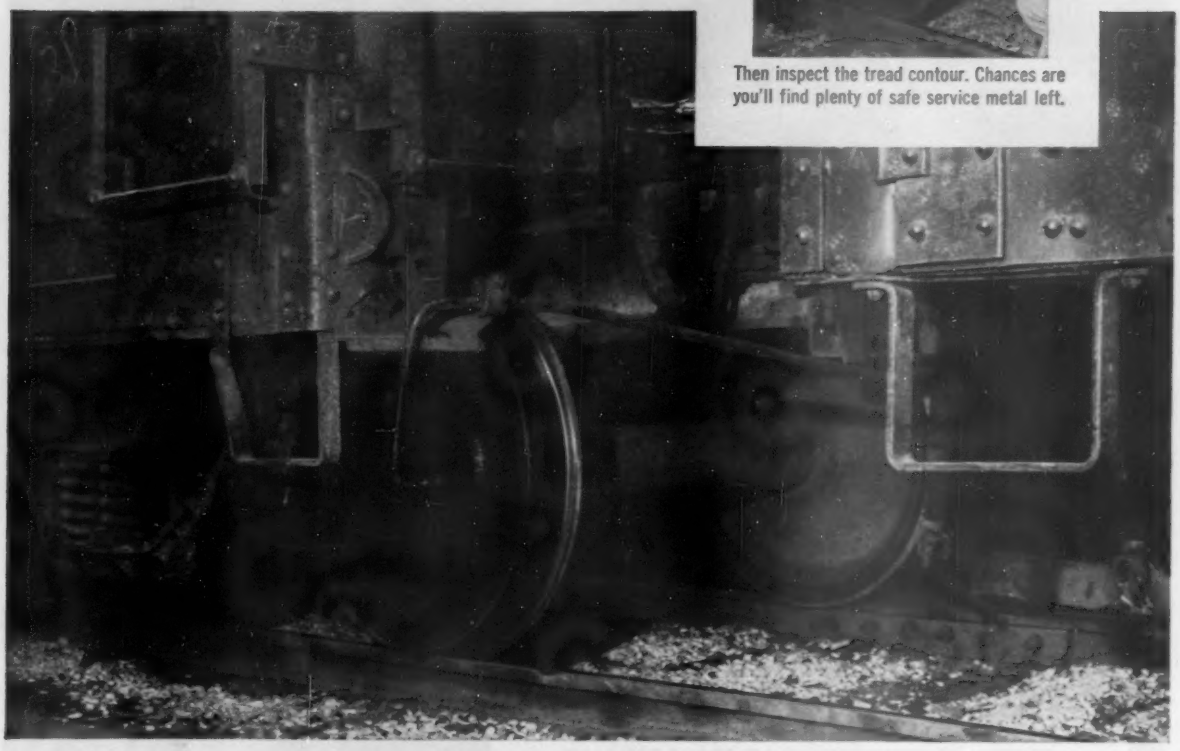
For more information about service-proved Armco One-Wear Wrought Steel Wheels, contact our nearest sales office or write us at the address below.

Then inspect the tread contour. Chances are you'll find plenty of safe service metal left.



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Workbook of the Railways

Vol. 141, No. 21
November 12, 1956

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Hearing on the railroad motion . . .

. . . for an immediate freight-rate increase of 7%, which would be in addition to the 15% increase previously requested, will be held by the ICC's Division 2 in Chicago on November 26. Oral argument before the entire commission will begin December 3, also in Chicago. . . . p.7

$700 million will be the added cost . . .

. . . to railroads each year if the recently signed three-year wage settlement with non-operating employees is extended to include operating men. . . . p.8

FORUM: What to do about transport socialization . . .

. . . Everybody around the railroads knows about the unfairness of taxpayer-supported competition. Of course such competition ought to have its sails trimmed. But a more positive way to meet it is to let the railroads reflect their relative economy through competitive rates. . . . p.29

"Universal" locomotives . . .

. . . to meet the very diverse requirements of overseas railroads were developed with a "mobile laboratory." . . . p.30

Expensive tunnel eliminated . . .

. . . by a $460-thousand line change. Trouble and cost of replacing timber lining and keeping ahead of disintegration of rock are done away with. . . . p.33

First Mexican car plant . . .

. . . is turning out six freight cars a day. Most of its equipment came from the U.S. . . . p.35

Shippers like the unit load car . . .

. . . after a year's test. Arrangements are being made to put 3,000 of them in service. . . . p.36

BRIEFS

Traffic volume isn't the answer . . .

. . . to the railroads' rate-of-return problem, which must be

licks maintenance problems

at new low cost

lowest initial cost
—only $359 f.o.b. factory

lowest operating cost
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Whisks away grease, dirt, frozen gook—does a thousand-and-one tedious chores in a jiffy. Delivers 45 gallons of water per hour at pressure of 120 pounds per square inch. Safe, simple, practical, rugged—no gadgets or delicate controls. Also wheel-mounted units and two larger sizes. Ask for Bulletin 442.

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Current Statistics

Operating revenues, nine months	
1956	$7,829,083,355
1955	7,466,749,844
Operating expenses, nine months	
1956	$6,032,499,606
1955	5,619,486,124
Taxes nine months	
1956	$831,812,299
1955	820,788,381
Net railway operating income, nine months	
1956	$773,057,071
1955	836,306,002
Net income, estimated, nine months	
1956	$607,000,000
1955	658,000,000
Average price 20 railroad stocks	
November 7, 1956	99.28
November 7, 1955	93.01
Carloadings revenue freight	
Forty-three weeks, 1956	31,461,646
Forty-three weeks, 1955	31,209,235
Average daily freight car surplus	
Wk. ended Nov. 3, 1956	2,847
Wk. ended Nov. 5, 1955	2,475
Average daily freight car shortage	
Wk. ended Nov. 3, 1956	11,726
Wk. ended Nov. 5, 1955	21,942
Freight cars on order	
October 1, 1956	122,421
October 1, 1955	52,913
Freight cars delivered	
Nine months, 1956	47,897
Nine months, 1955	25,901
Average number railroad employees	
Mid-Septembe 1956	1,041,404
Mid-September 1955	1,092,367

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Week at a Glance CONTINUED

solved if facilities are to be kept adequate and modern. That was emphasized by President J. M. Symes of the Pennsylvania in his presentation in Ex Parte 206. He told the ICC that a "complete refutation" of any such idea was the poor-earnings showing of the postwar period when railroads "have been operating to the capacity of their transportation facilities, which have been shrinking."

Reopening of divisions case . . .

. . . is sought by Official-territory railroads. The case, No. 29885, involves traffic moving between Official and Southern territories. The ICC decided it in 1953 with a report which increased the Official lines' shares of the joint rates. Those lines now say they have new evidence to show that the present divisions basis is unjust and unreasonable.

Truck-tax policies . . .

. . . of the trucking industry, as represented by American Trucking Associations, may be revised after a meeting in Chicago November 26 "to review and possibly revise the industry's policy on taxation of interstate trucks."

A yard fullness indicator . . .

. . . keeps the yardmaster at the Milwaukee's Twin Cities yard always informed exactly how many cars are on each classification track.

Low water hits barge lines . . .

. . . Freight service to ports on the upper Mississippi and Missouri rivers north of St. Louis was suspended October 20, according to a spokesman for Federal Barge Lines. Low water caused by drouth in the upper river valley will also make barge navigation on the Illinois Waterway "extremely difficult".

ICC personnel programs . . .

. . . now under way contemplate new Civil Service examinations for various positions such as locomotive inspectors, service agents, and safety inspectors. This is reported by Commissioner Murphy as he warns that prospective retirements now confront the commission with a personnel crisis. As he puts it, "the failure to plan for the future has caught up with us."

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in equipment for better railroad service

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- *first revolutionary low-cost freight cars!*

Talgo ©

This is the train that started the trend... and now has a million-mile lead in revenue service! The first low-cost, lightweight *Talgo* in America, the "Jet Rocket" between Peoria and Chicago on the Rock Island Line, has cut operating costs, maintained or bettered schedules, attracted new passengers for its daily round-trip runs! First by far, the acf *Talgo* is still setting the pace for service-proved modern passenger trains.

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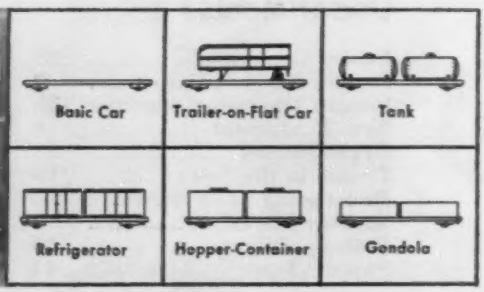

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RAILWAY AGE
Workbook of the Railways

Interim Rate Plea Set for Hearing

It will be at Chicago November 26 on motion of eastern and western railroads for immediate 7% advance to offset increases in wages and other costs

Hearing will be held by the Interstate Commerce Commission's Division 2 at Chicago November 26 on the motion filed by eastern and western railroads for authority to make an immediate freight-rate increase of 7%. Oral argument before the entire commission will follow December 3, also at Chicago.

The motion was filed November 6, and the commission made it part of the Ex Parte 206 case which also involves the petition filed earlier by the same roads for a 15% increase to improve their rates of return (Railway Age, Oct. 8, p. 7). The proposed 7% would be in addition to the 15%.

It is designed to offset recent increases in wages and other costs. It had been anticipated since the wage-case settlement which gave non-operating employees an increase of 26½ cents per hour, including 12½ cents which became effective November 1.

Emergency—Arguing that the cost increases have confronted the petitioning roads with a "critical emergency . . . an acute financial situation," the motion asked for authority to make the proposed interim increase effective immediately on one day's notice. It was calculated that the costs sought to be offset amount to about $9 million a week or $40 million a month.

Southern roads, which failed to join in the 15% petition, also failed to become parties to the motion. Their representatives advised representatives of eastern and western roads of that decision at a November 5 Washington meeting which preceded the filing of the motion. R. E. Boyle, Jr., chairman of the Southern Freight Association, said the southern lines had not completed their study of the situation. They are nevertheless respondents in the case, the commission's order instituting it having brought in "all" railroads of the country.

Holdouts—Two eastern roads which failed to join in the 15% petition—the Lackawanna and Virginian—are parties to the 7% motion. This is not to be construed as a joinder of those two roads in the petition, a footnote to the motion said. Other holdouts from the petition, such as the Frisco, Illinois Central and Gulf, Mobile & Ohio, did not become parties to the motion either.

Like the petition's 15% plea, the motion's 7% proposal would be subject to exceptions and hold-downs. The exceptions would apply to coal and coke, where the increases would be 10 cents per net ton. An exception to this would be export coal originating on the Chesapeake & Ohio on which no increase is proposed.

The hold-downs would apply on fresh fruits and vegetables and canned goods, where the maximum increases would be 8½ cents per 100 lb. Also on lumber and sugar, where maximum increases would be 6 cents per 100 lb.

At the Chicago hearing, evidence in support of the motion will be limited to verified statements submitted in the case by Graham E. Getty, assistant vice-president of the Association of American Railroads, and those submitted by traffic officers of eight of the petitioning roads. All of these statements, including one by Mr. Getty, were submitted last month in support of the 15% petition; but another Getty statement, an affidavit attached to the motion, is also involved.

Requests for opportunity to cross-examine any of these railroad wit-

Cuban RRs Fight to Begin "Ferro-Camion"

A crucial battle to give railroads the right to introduce piggyback in Cuba is being waged before the country's Transport Commission. While railroads believe they now possess the right to move truck trailers over their lines, they are nevertheless going to the authorities in a carefully planned campaign to put that right firmly before the public's eye.

Called Ferro-Camion (literally, iron way truck) Cuban piggyback is ready to start with ten 40-ft specially rebuilt flat cars recently delivered by the Rail—& Industrial Equipment Co. from its Landisville, Pa., plant. The cars—shown on test at Havana—belong to the Cuba Railroad (part of the Consolidated of Cuba), serving the eastern half of the island republic.

Cuba's Ferro-Camion will carry only the trailers of certificated independent truckers. Contracts have already been made with at least one leading highway operator. Initially, service will be offered on an overnight and half-day basis between Havana and Santiago, 357 miles.

nesses must be submitted to the witness or his attorney on or before November 21. Evidence, including oral testimony, in opposition to the motion, subject to cross-examination, will also be received, but it will be limited to issues presented by the motion.

The Getty affidavit presented figures in specific support of the emergency increase. The figures showed that the higher wages and other cost increases amount to about $450 million a year for the railroads as a whole. A 7% increase, if applied on a countrywide basis, would yield about $533 million, but Mr. Getty pointed out that this amount would not be realized.

The yield, he explained, would be reduced by such things as the delay in getting intrastate adjustments, and subsequent reductions in individual rates to meet competition. He nevertheless assumed a full yield and calculated that the 1955 return would have been only 4.18% if the new costs and 7% rate advance had been in effect throughout that year.

Meanwhile, the motion had asserted that present earnings are "so inadequate" that the cost increases cannot be absorbed. "Working capital," it continued, "has already been depleted to the point where it cannot be relied upon in meeting the critical emergency which now confronts the railroads. They face an acute financial situation which can only be met by the emergency increase sought. In the absence of such relief the railroads will be confronted with the necessity of drastically curtailing maintenance and capital expenditures."

The motion also expresses the railroads' willingness to accept a condition stipulating that they make refunds in amounts of any differences between increases granted on the emergency basis and those subsequently approved after full hearing of the case. So, it was argued, the commission would have a way to give the shipping public "the benefit of retroactive protection." And it was also pointed out that there would be no way to give the railroads retroactive relief.

On the 15% phase of the case, the commission issued a November 7 order changing the hearing schedule previously announced (**Railway Age,** Oct. 8, p. 7).

The Washington hearing has been postponed to January 24, 1957 (from January 15, 1957), and the oral argument to February 11, 1957 (from January 22, 1957). An additional hearing has been scheduled for next February 4 at Salt Lake City, Utah.

Wage Package Could Cost $700 Million

That would be effect if agreement with non-operating employees is, as expected, extended to non-operating employees

If the recently signed three-year wage agreement between the railroads and 11 non-operating unions is extended to include operating employees, the cost to railroads will be in the neighborhood of $330 million during the first year.

Another $185 million would be added to this cost in each of the second and third years.

The agreement between the railroads and the non-operating unions, which represent about 728,000 employees, calls for pay boosts totaling 26½ cents an hour over the three-year period (Railway Age, Oct. 29, p. 4). It provides for a first-year wage increase of 10 cents an hour, effective November 1; an additional seven cents an hour on November 1, 1957; and another seven cents an hour on November 1, 1958.

The carriers also agreed to apply an additional 2½-cents-an-hour increase, or $4.25 a month per employee, toward the cost of an employee dependents' hospital, medical and surgical plan.

The agreement also provides for a cost-of-living escalator clause, which ties wage rates to fluctuations in the Bureau of Labor Statistics' consumers price index. Rates of pay will increase or decrease one cent an hour for each half a point rise or fall in the price index. The current index of 117.1 will serve as the base, with adjustments to be made at six-month intervals beginning on May 1, 1957.

A moratorium until November 1959 on wage increases or decreases or other rules applicable to compensation was also included in the contract.

It was understood as this issue of Railway Age went to press, that a major stumbling block to settlement between the carriers and operating unions on the same basis were moratorium provisions.

Meanwhile, negotiations with the Order of Railroad Conductors and Brakemen have moved along from individual railroads to industry-wide negotiations and are currently in mediation.

Negotiations between the carriers and the Brotherhood of Locomotive Engineers are still progressing on an individual-carrier basis.

Nine Months' Net Was Down $51 Million

It was $607 million, compared with $658 million in first nine months of last year—September net, $79 million, off $2 million

Class I railroads, in the first nine months of this year, had estimated net income, after interest and rentals, of $607 million, according to the Bureau of Railway Economics of the AAR.

That was a decrease of $51 million below the $658 million reported for the first nine months of 1955. The estimated net income for September was $79 million, down $2 million from September 1955's $81 million.

The 9-months' net railway operating income, before interest and rentals, was $773,057,071, off $63 mil-

(Continued on page 10)

MARKET OUTLOOK THIS WEEK

CARLOADINGS DOWN. — Loadings of revenue freight in the week ended November 3 totaled 800,272 cars, the Association of American Railroads announced on November 8. This was a decrease of 16,531 cars, or 2.0%, compared with the previous week; a decrease of 3,989 cars, or 0.5%, compared with the corresponding week last year; and an increase of 104,246 cars, or 15.0%, compared with the equivalent 1954 week.

Loadings of revenue freight for the week ended October 27 totaled 816,803 cars; the summary, compiled by the Car Service Division, AAR, follows:

REVENUE FREIGHT CAR LOADINGS
For the week ended Saturday, October 27

District	1956	1955	1954
Eastern	129,738	135,055	118,212
Allegheny	156,550	152,782	129,896
Pocahontas	65,607	65,369	53,834
Southern	132,206	133,891	128,754
Northwestern	136,842	135,313	108,948
Central Western	135,990	143,543	137,871
Southwestern	59,870	63,695	58,718
Total Western Districts	332,702	342,551	305,537
Total All Roads	816,803	829,648	736,233
Commodities:			
Grain and grain products	56,363	59,987	60,055
Livestock	13,870	14,680	14,328
Coal	146,507	137,581	129,950
Coke	12,429	13,076	9,055
Forest Products	44,219	47,500	46,732
Ore	87,708	76,929	42,213
Merchandise l.c.l.	62,032	64,841	65,384
Miscellaneous	393,675	415,054	367,516
October 27	816,803	829,648	736,233
October 20	828,741	829,078	745,945
October 13	823,207	821,578	721,336
October 6	815,004	801,559	702,910
September 29	831,438	815,535	721,643
Cumulative total, 43 weeks	31,461,646	31,209,235	28,181,544

IN CANADA—Carloadings for the seven-day period ended October 21 totaled 95,429 cars, compared with 83,282 cars for the previous seven-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
October 21, 1956	95,429	35,308
October 21, 1955	91,994	33,385
Cumulative Totals:		
October 21, 1956	3,582,285	1,397,940
October 21, 1955	3,280,464	1,314,334

New Equipment

FREIGHT-TRAIN CARS

► *Missouri Pacific.*—Will build 2,200 freight cars in 1957 at its DeSoto, Mo., shops, estimated cost $16,600,000; included are 900 70-ton gondola cars; 900 50-ton box cars; 200 pulpwood cars; and 200 50-ton box cars for the Missouri-Illinois.

Purchases and Inventories

► *Eight Months' Purchases Down 2.2%.*—Purchases by domestic railroads of all types of materials in first eight months of 1956 were $36,782,000, or 2.2%, below those for comparable period last year, according to following tables prepared by Railway Age research department:

PURCHASES*	August 1956	Eight Months 1956	Eight Months 1955
	(000)	(000)	(000)
Equipment**	$ 20,600	$ 318,049	$ 602,728
Rail	2,027	60,150	67,619
Crossties	9,441	58,369	35,069
Other Material	100,638	886,705	646,238
Total from Manufacturers	$132,706	$1,323,273	$1,351,654
Fuel	35,207	289,560	297,961
Grand Total	$167,913	$1,612,833	$1,649,615

*Subject to revision.
**Estimated value of orders.

INVENTORIES*†	August 1, 1956	August 1, 1955
	(000)	(000)
Rail	$ 49,709	$ 51,713
Crossties	87,742	92,345
Other Material	560,588	485,270
Scrap	21,880	18,470
Fuel	30,768	31,300
Total	$750,687	$679,098

*Subject to revision.
†All total inventory figures taken from ICC statement M-125 for month indicated.

New Facilities

► *Chesapeake & Ohio.*—Ordered from Union Switch & Signal Division-Westinghouse Air Brake Company, equipment for electro-pneumatic car retarder installation in new 32-track westbound manifest yard at Russell, Ky.; Union automatic switching, Teletype tape storage and Velac automatic retarder controls are included in project.

► *Delaware & Hudson.*—Will install CTC between Afton, N.Y., and Carbondale, Pa., 60 miles; installation involves retirement of 26.8 miles of main track and 3.7 of sidings and yard tracks; remote control snow melters are to be installed on 22 switches; control will be from dispatcher's office at Oneonta, N.Y.

(Continued on next page)

RAILWAYS IN THE MARKET—THIS WEEK

CONTINUED

► *Frisco.*—Has begun construction of new consolidated car repair shop at Springfield, Mo., estimated cost between $600,000 and $700,000; facility includes fabricated steel main shop building, 108 ft by 550 ft, and two attached wings, one to house repair machinery and the other a one-track paint shop.

► *Minneapolis & St. Louis.*—Is building a $300,000 rail-barge port at Keithsburg, Ill., on the Mississippi river; temporary facilities will be completed shortly and permanent facilities, including a 425-ft warehouse, will be ready March 1, 1957.

► *Norfolk & Western.*—Will install CTC between Norton, Va., and Bluefield, 100 miles; and between Cedar Bluff, Va. and Susanne, W. Va., 25 miles.

► *Pittsburgh & Lake Erie.*—Has made initial installation of two-way radio on 23 engines used in yard and terminal service at Pittsburgh, Pa.; equipment, furnished by Motorola, is new single unit which meets AAR specifications for standardization.

► *Seaboard Air Line.*—Requested bids for construction of its new, completely air-conditioned general office building in Richmond, Va.; bids, to be opened November 27, will cover construction of the building above the foundation—work on which is scheduled for completion November 14—plus preparation of parking area and landscaping (Railway Age, April 2, p. 58).

► *Spokane, Portland & Seattle.*—Awarded $987,250 contract for placement of bank protection along 12 miles of line; project is necessitated by new Dalles Dam on Columbia River.

RR Community Committee Helps Young Robin Hoods

Boys Clubs of Columbus, Ohio, recently were enabled to initiate an archery course for members through the generosity of the city's Railroad Community Committee. Archery equipment was donated to each of the Columbus Boys Club units by the committee. H. H. McEown (above, right), special representative for the Pennsylvania, and chairman of the committee's youth activities, is shown here presenting equipment to John W. Comtess, executive director of the Columbus Boys Clubs.

(Continued from page 8)

lion from the comparable figure, $836,306,002, for the first nine months of 1955. September's net railway operating income was $97,428,271, compared with September 1955's $103,691,861.

Fourteen Class I roads failed to earn interest and rentals in this year's first nine months. The rate of return for the 12 months ended with September averaged 3.96%, compared with 4.24% for the previous 12 months.

CLASS I RAILROADS—UNITED STATES

Month of September

	1956	1955
Total operating revenues	$ 874,850,374	$ 876,681,976
Total operating expenses	657,880,452	651,446,453
Operating ratio—percent	75.20	74.31
Taxes	100,410,934	101,654,206
Net railway operating income (Earnings before charges)	97,428,271	103,691,861
Net income, after charges (estimated)	79,000,000	81,000,000

Nine Months ended September

Total operating revenues	$7,829,083,355	$7,466,749,844
Total operating expenses	6,032,499,606	5,619,486,124
Operating ratio—percent	77.05	75.26
Taxes	831,812,299	820,788,381
Net railway operating income (Earnings before charges)	773,057,071	836,306,002
Net income, after charges (estimated)	607,000,000	658,000,000

IC Expands T-O-F-C

Overnight service between Chicago and St. Louis and between St. Louis and Memphis will be provided starting November 15 in an expansion of the Illinois Central's piggyback service. Second-morning service between New Orleans and St. Louis also will be inaugurated, the road said.

L. A. Schellenberger, general merchandise agent, reported that the IC now uses 50 truck trailers and 36 t-o-f-c equipped flat cars in its piggyback operations.

Regional Hearings Set For Demurrage Case

Four out-of-Washington hearings will be held by the Interstate Commerce Commission in the case involving the railroads' proposal to increase demurrage charges.

They will be at Atlanta, Ga., December 3 and 4; Dallas, Tex., December 6 and 7; San Francisco, Calif., December 10-12, inclusive; Highland Park, Ill., January 8, 1957,

through January 11. Requests from interested parties prompted the commission to schedule them. The Washington hearing is scheduled for November 19 (Railway Age, Oct. 1, p. 13).

July Accidents

The ICC has made public its Bureau of Transport Economics and Statistics' preliminary summary of railroad accidents in July and this year's first seven months. The compilation, subject to revision, follows:

Item	Month of July 1956	Month of July 1955	7 months ended with July 1956	7 months ended with July 1955
Number of train accidents*	713	784	5,430	4,763
Number of accidents resulting in casualties	32	47	295	269
Number of casualties in train, train-service and nontrain cidents:				
Trespassers:				
Killed	99	105	459	427
Injured	97	95	506	449
Passengers on trains:				
(a) In train accidents*				
Killed	..	..	43	..
Injured	64	94	883	293
(b) In train-service accidents				
Killed	1	..	7	4
Injured	173	170	966	955
Travelers not on trains:				
Killed	..	..	2	4
Injured	65	58	495	495
Employees on duty:				
Killed	13	27	130	138
Injured	1,550	1,617	10,724	9,864
All other nontrespassers:**				
Killed	89	87	737	757
Injured	293	339	2,919	2,956
Total — All classes of persons:				
Killed	202	219	1,378	1,330
Injured	2,242	2,373	16,493	15,012

*Train accidents (mostly collisions and derailments) are distinguished from train-service accidents by the fact that the former caused damage of $375 or more to railway property. Only a minor part of the total accidents result in casualties to persons, as noted above.

**Casualties to "Other nontrespassers" happen chiefly at highway grade crossings. Total highway grade-crossing casualties *for all classes of persons, including both trespassers and nontrespassers*, were as follows:

Persons:				
Killed	85	71	719	682
Injured	186	190	2,054	1,987

AU Will Conduct Ninth Traffic Institute

The American University, Washington, D.C., will conduct its ninth Institute of Industrial Transportation and Traffic Management from January 8 through January 25, 1957. Its director will be Dr. John E. McGrath, who is director of the university's transportation program.

RI Truck Operation Under ICC Scrutiny

The Interstate Commerce Commission has instituted an investigation of trucking operations being conducted on three routes by the Rock Island Motor Transit Company, subsidiary of the Rock Island.

The order of investigation said "there is reason to believe" that Transit is performing operations which are not supplemental to RI rail service, as required by its certificate covering the routes involved. The routes are in Iowa between Des Moines and Eldon and between Muscatine and Eldon, and in Illinois between Silvis and Chicago.

The inquiry, instituted on the commission's own motion, is docketed as No. MC-C-2024.

ICC Asked to State Truck-Rate Policy

The National Industrial Traffic League has asked the Interstate Commerce Commission to state "with some degree of finality" whether the Motor Carrier Act requires truckers to develop "consistent uniform class rate structures," or whether the act's requirements are met while truck-rate scales continue to be based on railroad rates, "with patchwork of additions, arbitraries, holddowns and what not."

The league's request was embodied in a pleading which took the position that the commission's interpretation of Part I's requirements as to railroad rates would seem to call for the "same basic philosophy" as to truck rates. The pleading was a petition for reconsideration of the commission's recent decision which permitted truckers in Middle Atlantic territory to keep their rates based on the rail scale (Railway Age, Sept. 10, p. 8).

"If in principle what is sound, sensible and lawfully required in interpretation of Part I of the act as regards railroads is not similarly sound, sensible and lawfully required in interpretation of Part II of the act as regards motor carrier transportation, the league would like to be informed to that effect with some de-

GN Annual Report a Winner Three Ways

Great Northern President John M. Budd (left), displays copy of annual report which won highest awards as best such document published this year in all industry and among all transportation companies and all railroads with revenues of $200 million and over. Presentation of "Oscars" for each category is made above by Dr. P. R. Bretey, chairman of judging board, at annual "Financial World" awards banquet held recently in New York City. First, second and third prizes for top annual reports by manufacturers of railway equipment were won by Union Tank Car Company, Westinghouse Air Brake Company and American Steel Foundries.

gree of finality in a plainly stated decision of the commission," the petition said.

It also recalled that the league has taken part in many cases "in the hope that there could be attained recognition in motor carrier rate making of these commission established principles of rail transportation."

And it went on to note that Part II's rate-making rule contemplates that truck rates "are to reflect the circumstances and conditions of highway transportation."

If its position appeals to the commission, the league asks that a mandate be issued requiring the involved truckers to develop their own class rate structure. If the commission is of the contrary view, and says so, the league promises it will no longer get into area rate proceedings.

The present proceeding, the petition said, has been regarded by the league as "a test case wherein it is hoped the commission will say something constructive, decisive and authoritative on the question." As to the recent decision, which was by Division 2, the league said it thought the division "was so perplexed and troubled with the direct issues of propriety of the rates in detail for the charges they produce on the moving traffic that it simply gave no thought to and passed up entirely the broader question."

SP Would Prune Some Passenger Runs

Southern Pacific spelled out future plans for its passenger service—train by train—in recent testimony by C. W. Burkett, Jr., SP general attorney before the California Public Utilities Commission.

It is SP policy to continue train service "which the public supports and needs, even at a loss," Mr. Burkett pointed out. This includes San Francisco commuter service and such trains as the "Coast Daylight," "San Joaquin Daylight," "Cascade," "City of San Francisco," "Sunset Limited" and "Golden State."

The road plans to continue service on "less patronized trains wherever possible, through consolidation of service and seasonal adjustments," Mr. Burkett said. In line with this policy, SP has petitioned to consolidate the overnight San Francisco-Los Angeles "Lark" with the "Starlight." The consolidated train would provide both Pullman and coach service without lengthening the Lark's present schedule, he said. Out-of-pocket passenger losses would be cut by nearly $1,000,000 annually by this move.

Several other adjustments are also in the works. They include, rescheduling the "Shasta Daylight" from daily to tri-weekly during the winter months and consolidating Sacramento-San Francisco trains Nos. 226, 251, 248 and 247 with the through trains "City of San Francisco" and "Overland Limited."

"Outright discontinuation is planned for trains which have been virtually abandoned by the public," Mr. Burkett said.

Record Mass Christening for Pullman Cars

In what was described as the greatest mass christening ceremony for Pullman cars in railroad history, the names of 22 famous Pittsburghers recently took to the rails. The cars—which make up the complete twin units of the Pennsylvania's "Pittsburgher"—were named for 22 famous Pittsburghers. The PRR highlighted the occasion with a "Tribute to Pioneers of Pittsburgh" featuring a trackside reception and dining-car luncheon at which guests of honor were descendants of men for whom the cars were named. James M. Symes, PRR president, is shown here with guests Mrs. David Barry (right), and her daughter, Mrs. Lawrence Yont.

No Proposed Report In Eastern Fare Case

There will be no proposed report in the eastern fare case in which eight railroads are proposing to increase their coach rates by 5% and six of them are also proposing a 45% increase in fares for travel in parlor and sleeping cars.

This has been announced by the Interstate Commerce Commission, which has set December 7 as the date for oral argument of the case before the commission. (Railway Age, Sept. 17, p. 8).

BAR-Trucker Tie Probed by ICC

The Interstate Commerce Commission has instituted an investigation of the relationship between Maine Freightways, a common carrier trucker, and the Bangor & Aroostook.

The order of investigation said it appeared that control or management in a common interest of the railroad and trucker "may have been effectuated and may be continuing" in violation of the Interstate Commerce Act. The inquiry is docketed as No. MC-F-6410.

C&NW Petitions to Drop 18 Passenger Runs

The Wisconsin Public Service Commission will begin hearings sometime in mid-November on a Chicago & North Western petition to discontinue 14 passenger trains, to substitute bus service for four seasonal runs, and to shift two other trains to seasonal operation.

Also included in the petition are plans to use highway trucks or "other supplementary service" for mail and express over certain routes. Whether this type service will be used depends on the outcome of negotiations now underway between the railroad and the Post Office Department.

Gift for American U.

C. E. Pond (right), general superintendent of motive power of the Norfolk & Western, is joined by Dr. Hurst R. Anderson, president of the American University, and Dr. John E. McGrath, director of the university's transportation program, in looking at the locomotive bell recently presented to the school by the N&W as part of the celebration of National Transportation Week. Dr. McGrath will become assistant director of education for the new transportation center at Northwestern University on January 1 (Railway Age, Oct. 15, p. 13).

The program also calls for substantial schedule revision such as advancing the Chicago departure of the "Twin Cities 400" from 3 p.m. to 12:15 p.m. The road expects to save, as the result of this program, more than $2 million annually.

These savings "will make possible the immediate purchase of two modern streamlined trains for service in the state and will also facilitate upgrading and modernizing the remainder of its passenger trains," the announcement said.

Large-Scale Mergers Seen by Macfarlane

Mergers in the next 15 to 20 years will leave this country with about 25 strong, consolidated railroad systems, predicts Robert S. Macfarlane, Northern Pacific president.

Speaking at a St. Paul civic club luncheon, Mr. Macfarlane said it is his conviction that "extensive consolidations" are inevitable. They must be brought about, he said, to maintain a transportation system sufficiently strong to serve adequately the expanding peace-time economy and to be ready in event of a national emergency.

Consolidations and mergers which cause wholesale discharge of employees would not be in the public interest, Mr. Macfarlane continued. Unification studies should be made on the basis of gradual integration of the properties over a period of years so as to avoid large reductions in payroll.

Commenting on the current unification study involving the NP, the Great Northern, the Burlington and the Spokane, Portland & Seattle, Mr. Macfarlane said he was certain there would be no merger unless exploratory studies clearly show the merger to be in the public interest.

Referring to the recent request by some eastern lines for a 45% increase in first class fares, Mr. Macfarlane said, "I think the western lines pretty generally subscribe to the conviction that railroads are going to continue to be an important factor in the passenger business for a long time. . . . I firmly believe that with favorable schedules, up-to-date equipment, and top notch all-around service, which is receiving such gratifying patronage on our transcontinental trains, the NP will be an important factor in long-haul passenger business for many years to come."

Mr. Macfarlane said the industry has been getting a distorted view of passenger-train deficits because of ICC rules for allocating expenses between passenger and freight train operations. "Under the formula, much of the maintenance of track, bridges, facilities and some services are assigned to the passenger service on a train-mile basis," he explained. These expenses would continue even if passenger trains were eliminated.

Another serious problem facing the industry, Mr. Macfarlane explained, "is the need for higher freight rates brought about by the increased cost of everything railroads must buy, both goods and service. For example, we were recently advised by the manufacturer that 80 diesel locomotives units we had ordered this year for delivery in 1957 will cost us $549,000 more than the original quotation of $13,000,000."

(More News on page 16)

(Advertisement)

OLD WORLD TREASURES
RECLAIMED FOR
NEW CHICAGO LANDMARKS

Chicago, Illinois. — The wrecking of many old dwellings in Chicago to make way for the new super motor expressways has proved to be a bonanza for alert interior decorators.

Present day decorating schemes combine the old and the new—the modern to give brightness and, from the condemned houses that stood in the way of these expressways, the traditional lamps, lanterns, shutters, doors, gratings, iron scrolls, stairways and leaded glass windows add grace and stability of the past.

Much of this newfound treasure is centuries old. It was imported from Europe by immigrants when they built their new residences to remind them of their old world home and villages.

This is the story behind the setting of Samuel Leeds' "The Little Square" in his Hotel Hamilton, 20 South Dearborn St. He has constructed a facsimile of a quaint, old world piazza using interesting materials and handiwork from those abandoned buildings. While the wood piazza could mislead you into thinking "The Little Square" is Italian it could be a cafe on a Paris street or a patio in Spain since the decor, gathered from many locations, colorfully incorporates all three.

An added romantic touch is in the center of this old world courtyard. It is a fountain unearthed from the lava covered village of Ostia, Italy, which was destroyed by Mt. Vesuvius. Tradition has it that couples who pledge their devotion at this fountain are blessed with eternal love. To seal their pledge the lovers may drink a special potion named simply, but descriptively, a "Lovers Delight," which was created by Michael Lafrumento, a forgotten romanticist of this period.

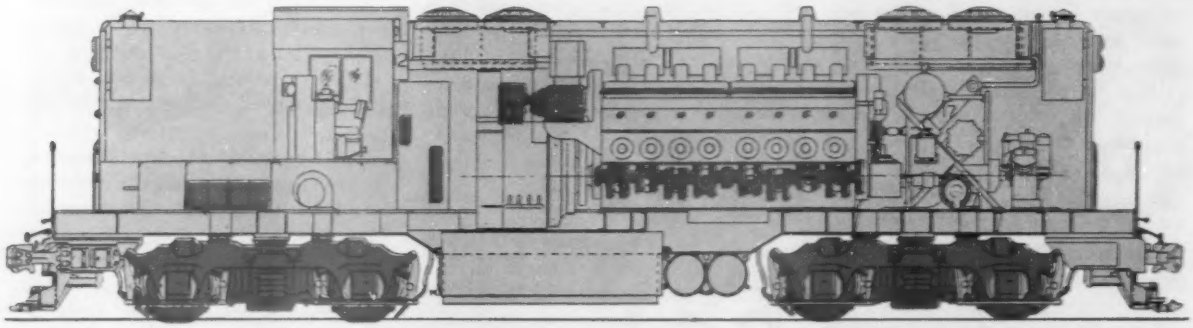
Romance with an Old World atmosphere is still alive in Chicago, thanks largely to those old treasures saved from the march of progress.

(Advertisement)

Through Electro-Motive manufacturing

A VETERAN FT IS CONVERTED

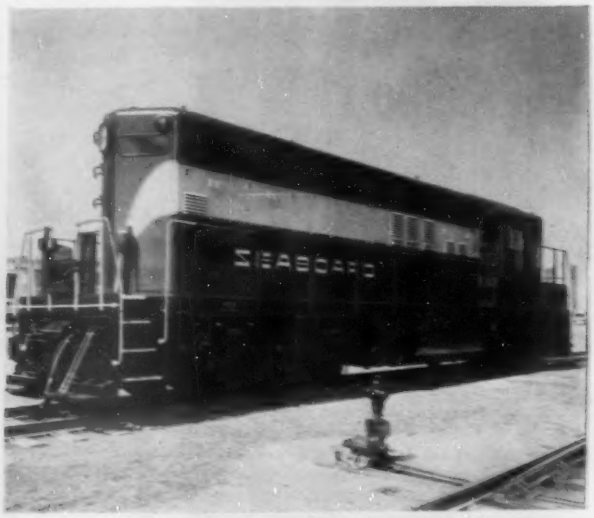
How it is done:



Indicated in red on this drawing of a GP9 are the parts that are used from the old FT. Only these parts are used. Through Electro-Motive factory facilities they are carefully inspected, remanufactured, modernized and assembled into a new locomotive.

This locomotive is manufactured as new, on our regular production line. The same processes and inspection techniques used in new production are used to change the old FT to a GP9. These closely controlled factory methods are your assurance of highest quality—the reason the locomotive you get back carries the same warranty and performance standards as our regular production units.

Here is how one railroad's FT locomotive looked as it arrived at our La Grange plant for converting to a GP9. This same railroad has since launched a regular program to convert all their remaining FT's.



And this is the result. This GP9 has the work capacity, economy and low maintenance features of a brand-new locomotive. In addition, the GP9 has far more flexibility and utility than the old FT.

facilities —
TO A MODERN GP9

The results:

Greater return on investment—as high as 30%

For the total cost of converting an FT to a GP9, the return on investment will run a minimum of 12½ per cent. Taking the additional cost alone of converting an FT to a GP9 as compared with merely rebuilding the FT in kind, the return on investment can be as high as 30 per cent for these two reasons:

1. Reduced maintenance costs – up to 35%

All the improvements in design and materials since the FT was built have been incorporated into the new GP9. In every important respect it is new—new power, increased performance, greater operating economy, and lower maintenance costs. Results show three GP9's will cost, on the average, thirty-five per cent less per locomotive mile to maintain than four FT's.

2. More work capacity and earning power – 3 do the work of 4

Tonnage Comparison

MPH	4FT's	3GP9's
40	5,970	6,120
50	3,820	3,900
60	2,540	2,560

With horsepower increased from 1350 to 1750 due to the new "C" type engine and numerous other improvements—three of the converted units are capable of the same work as four FT's. Chart at the left shows the tonnage comparisons in miles per hour.

PLANNING MATCHES MOTIVE POWER TO NEEDS

Many railroads are taking advantage of Electro-Motive's conversion facilities to meet increasing tonnage requirements at low cost and to supplement orders of new units. By scheduling in advance of need, the conversion of older locomotives to new, these roads are able to meet increasing power requirements as they occur, not months or years later.

For complete information on Electro-Motive's program for making new locomotives from old (there are almost as many conversions as basic units), call your Electro-Motive representative. He will be glad to give you a detailed account of the costs involved for your particular units, and also show you the profit advantages in advance planning.

Be sure to see the Electro-Motive conversion presentation when it comes to your railroad.

ELECTRO-MOTIVE DIVISION · GENERAL MOTORS

GENERAL MOTORS LOCOMOTIVES

LA GRANGE, ILLINOIS • *Home of the Diesel Locomotive*

In Canada: General Motors Diesel Ltd., London, Ontario

People in the News

CURRENT HAPPENINGS AMONG

Railway Officers

ALTON & SOUTHERN.—**Walter J. Nuebling,** chief engineer and purchasing agent of the A&S, the Bauxite & Northern, the Massena Terminal, the Point Comfort & Northern, and the Rockdale, Sandow & Southern, retired.

Raymond G. Brichler appointed chief engineer, and **C. D. Bruder** named purchasing agent, both at East St. Louis, Ill.

BALTIMORE & OHIO.—**Jervis Langdon, Jr.,** will leave the Association of Southeastern Railroads on December 1 to become general counsel on the staff of B&O Vice-President E. H. Burgess. Mr. Langdon has been chairman of ASR since 1953.

BANGOR & AROOSTOOK.—**Raymond W. Dow,** assistant vice-president—operations and maintenance, Bangor, Me., retired November 1. **Harold G. Duffy,** assistant superintendent of transportation, Houlton, appointed manager of operations at Bangor, succeeding Mr. Dow. **D. Keith Lilley,** trainmaster, Houlton, promoted to superintendent of transportation, Northern Maine Junction, succeeding **Lester E. Terrio,** retired. **Herschel P. Lee,** chief dispatcher, Houlton, appointed assistant superintendent of transportation there.

BESSEMER & LAKE ERIE.—**Franklin A. Fitzpatrick,** who resigned August 1 as manager of personnel, Illinois Central, appointed vice-president—staff, Chicago, of the B&LE and the following roads owned by U. S. Steel Corp.: Union RR; Youngstown & Northern; Donora Southern; McKeesport Connecting; Lake Terminal; Newburgh & South Shore; Birmingham Southern; Duluth, Missabe & Iron Range; and Elgin, Joliet & Eastern. Mr. Fitzpatrick will serve as consultant to the managements of these roads in labor relations and personnel matters.

BRITISH & IRISH RAILWAYS.—**T. D. Slattery,** resident vice-president and general traffic manager in North America, at New York, will retire in December for reasons of health.

F. A. Pope, part-time member of the British Transport Commission, appointed a non-resident director and president of British & Irish railways. **J. H. Brebner,** public relations adviser, BTC, appointed a non-resident director and vice-president of B&I railways.

BURLINGTON.—**M. I. Swennes,** assistant superintendent, LaCrosse (Wis.) division, appointed superintendent of terminals, St. Paul-Minneapolis, succeeding **A. C. McDonald,** retired. Mr. Swennes' successor is **I. C. Ethington,** trainmaster, Chicago, division, who in turn is replaced by **S. B. McNaghten,** trainmaster, Alliance (Neb.) division.

Kenneth R. Perry

R. O. Janes

CANADIAN NATIONAL—GRAND TRUNK.—**John S. Walker,** traveling freight agent, appointed general agent, freight traffic department, Grand Rapids, Mich

Claude Melancon, assistant director of public relations, Montreal, retired.

CANADIAN PACIFIC.—**Kenneth R. Perry,** superintendent, Medicine Hat, Alta., appointed assistant to vice-president, Montreal.

J. W. Morgan appointed assistant superintendent, Fort William Terminal division, Fort William, Ont.

CENTRAL OF GEORGIA.— **C. T. Hopkins,** assistant general freight agent, Birmingham, Ala., promoted to assistant freight traffic manager—sales and service, Savannah, Ga., succeeding **W. R. Wilson,** resigned to accept employment with another railway. **J. F. McKemie,** general agent, Kansas City, Mo., appointed assistant general freight agent, Birmingham, succeeding Mr. Hopkins. **G. A. Watson** appointed assistant general freight agent, Atlanta, Ga. **W. T. Dasher** appointed general agent, Denver, Colo., succeeding **C. P. Collier, Jr.,** transferred to Kansas City to replace Mr. McKemie.

CHESAPEAKE & OHIO.—**Randolph B. Johnston,** assistant general freight agent, Detroit, appointed assistant freight traffic manager there, succeeding **Lawrence J. Byrne,** who retired October 31.

CHICAGO & EASTERN ILLINOIS.—**F. V. Towle** appointed general agent, Nashville, Tenn., succeeding the late **F. W. Powers.**

CHICAGO & ILLINOIS MIDLAND.—**R. O. Janes,** superintendent transportation and equipment, promoted to superintendent. **W. G. Harvey,** master mechanic, succeeds Mr. Janes, and in turn is replaced by **M. N. Ettinger,** assistant master mechanic.

CHICAGO & WESTERN INDIANA.—The following operating department appointments announced: **Donald R. Turner,** from trainmaster to assistant superintendent; **John J. Moriarty,** trainmaster to supervising trainmaster; **Michael F. Hill,** trainmaster-night to trainmaster; and **James M. Phillips,** locomotive engineer, to trainmaster-night, all at Chicago.

CHICAGO & NORTH WESTERN.—**Vernon S. Mitchell,** assistant signal engineer, Louisville & Nashville, Louisville, Ky., appointed signal engineer, C&NW, Chicago, succeeding **Kenneth Chamberlain,** retired.

Robert C. Conley, trainmaster, Illinois Central, Congress Street yard, Chicago, appointed superintendent, C&NW, Wisconsin division, Milwaukee, succeeding **C. J. Meyer,** resigned.

Conrad J. Freeman, assistant land and tax commissioner, Chicago, retired November 1.

CLINCHFIELD.—**R. M. Kennedy** appointed district freight agent, Charlotte, N.C., succeeding **G. J. Mitchell,** retired.

Vernon S. Mitchell

Frank A. Murphy

ELGIN, JOLIET & EASTERN.—**P. B. Higdon** elected assistant secretary and assistant treasurer, effective November 6.

ERIE.—**Gerald M. Byers,** assistant division storekeeper, Meadville, Pa., promoted to division storekeeper there, succeeding **John J. Kukis,** who retired October 31.

FRISCO.—**W. J. Irwin,** assistant traffic manager, New York, appointed district manager—sales at that point, succeeding **William O. Dodge,** eastern traffic manager, who retired November 1. **P. J. Winters,** general eastern freight agent, named assistant district manager—sales, succeeding Mr. Irwin.

GREAT NORTHERN.—**W. T. Sloan,** trainmaster, St. Cloud, Minn., appointed director of specialized services, St. Paul, Minn., to succeed **Harold H. Holmquist,** whose appointment as superintendent, Minot division, Minot, N. D., was announced in Railway Age, Oct. 29, p. 35. Mr. Sloan's successor is **C. A. Keil,** safety supervisor, Lines East, Minneapolis, who in turn is replaced by **S. W. Mosvick,** assistant trainmaster, Willmar, Minn.

John F. Burns, general eastern agent, New York, appointed eastern and foreign traffic manager there, succeeding the late **W. B. Hartz. Michael A. Unger,** traveling freight agent, New York, named general agent there, succeeding **Ambrose T. Sims,** who replaces Mr. Burns as general eastern agent.

GULF, COLORADO & SANTA FE.—**R. E. Clancy** appointed division engineer, Temple, Tex., to succeed **W. S. Autrey,** promoted.

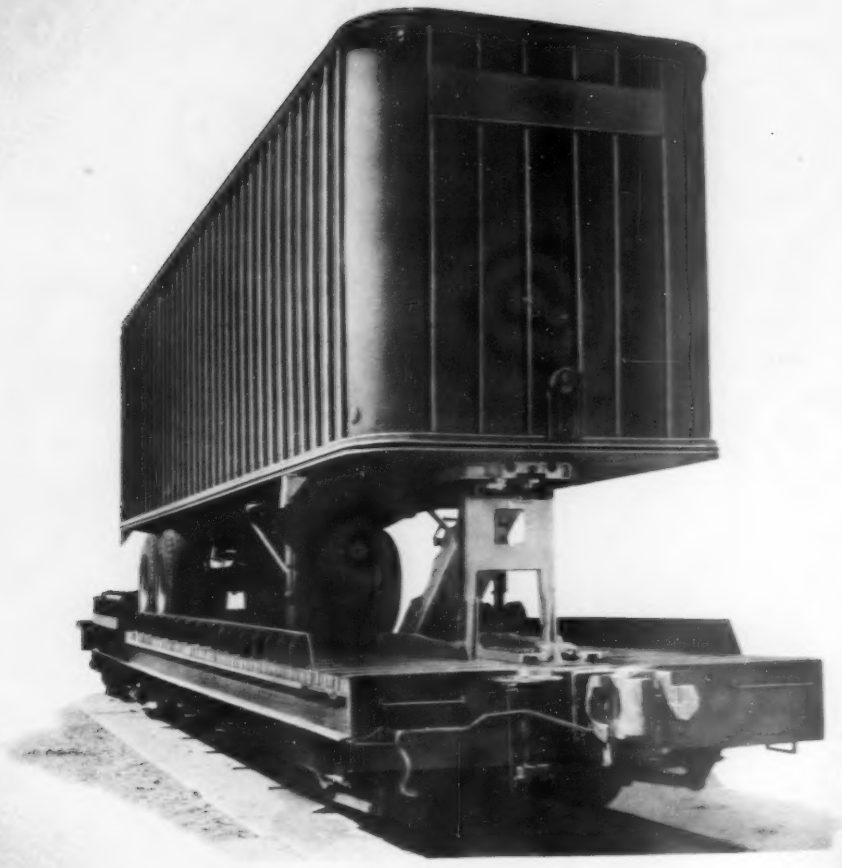
ILLINOIS CENTRAL.—**David B. Sweeney,** coal traffic manager, Chicago, promoted to general coal traffic manager there, effective December 1, succeeding **Rommie B. Smith,** who retires November 30. **H. Harrison Pesck,** district traffic agent, Grand Rapids, Mich., promoted to general agent, Milwaukee, succeeding **Howell H. Hays,** transferred to Grand Rapids.

LEHIGH & NEW ENGLAND.—**Joseph C. Pearson** appointed purchasing agent, Bethlehem, Pa., succeeding **W. B. Joachim, Jr.,** elected secretary, Lehigh Coal & Navigation Company. Position of assistant purchasing agent, formerly held by Mr. Pearson, abolished.

MAINE CENTRAL—PORTLAND TERMINAL.—**Frank A. Murphy,** freight traffic manager, appointed executive assistant, Portland, Me., to devote his attention to waterfront terminals, marine interests and related problems. **R. C. Morrow,** assistant freight

(Continued on page 37)

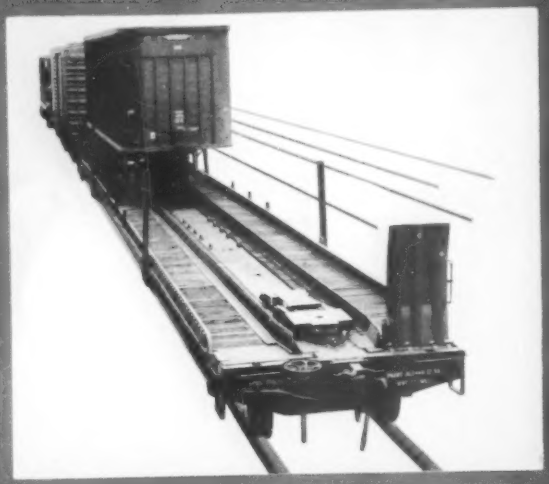
best news yet for trailer service!



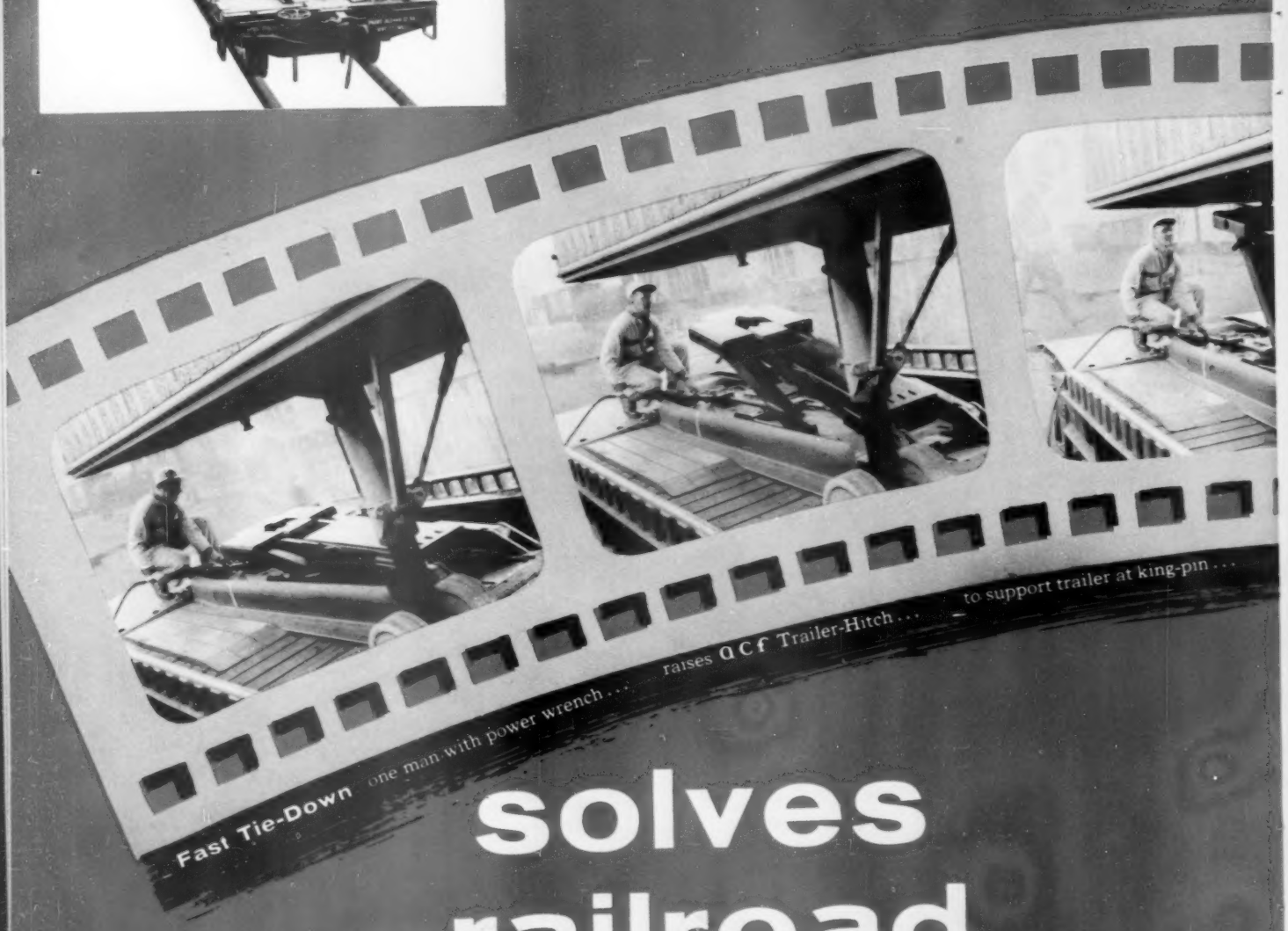
acf retractable TRAILER-HITCH

SPEED—firmly secures trailer to hitch in 2¾ minutes!
SIMPLICITY—one man with portable power wrench does complete job.
SAFETY—operator always clear of trailer; secure impact-resistant anchoring at strongest point.
SAVINGS—2 ways: saves man hours, saves terminal time.

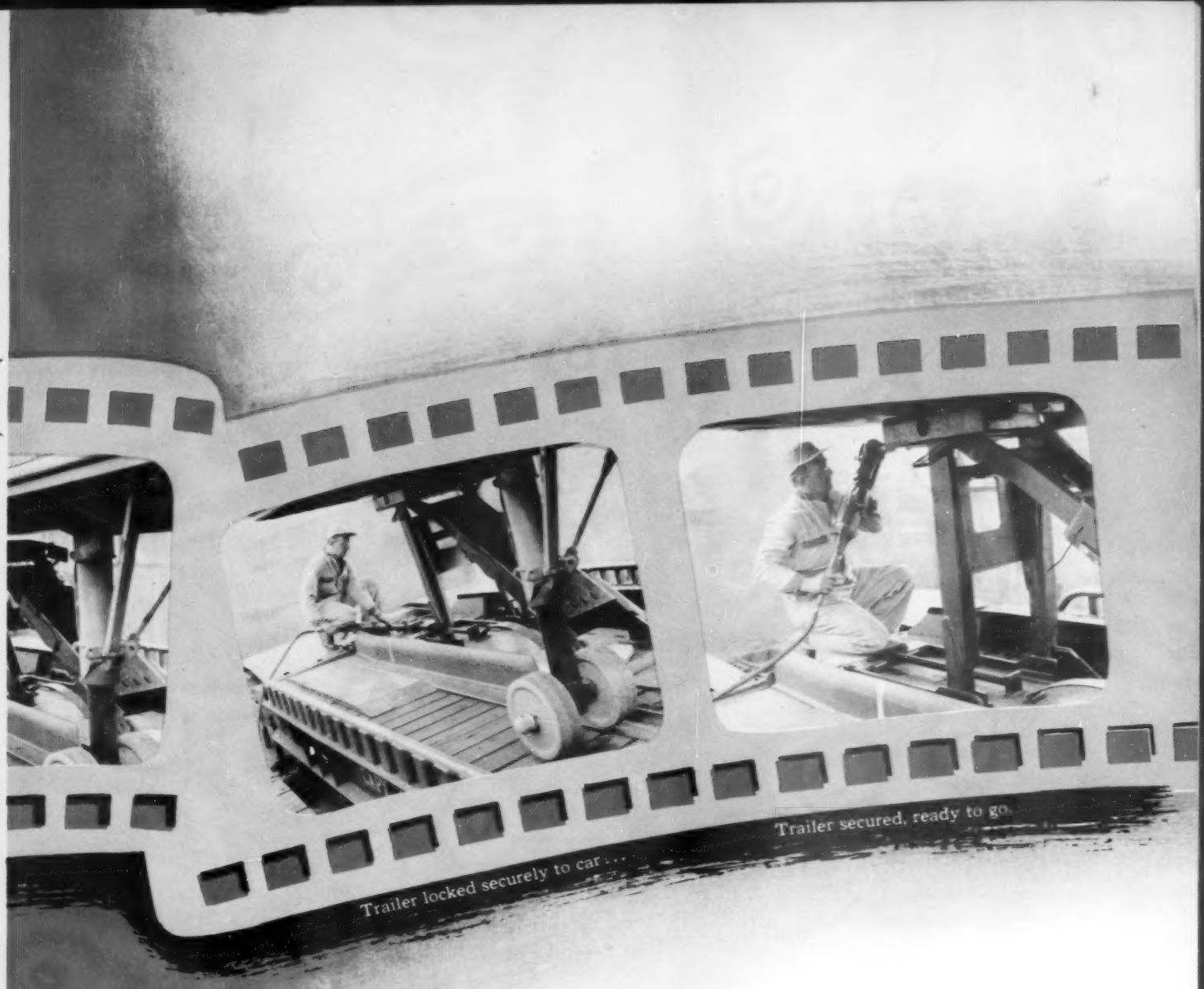
...THE KEY TO MORE EFFICIENT RAILROAD-TRAILER SERVICE



Thoroughly tested under operating conditions and proved in actual railroad service, the ACF Trailer-Hitch is the fastest, simplest, most secure device available for any standard trailer. Actual time tests prove that a single operator can match two *three-man* crews. Impact tests demonstrate the superior securing strength and cushioning capacity (more than twice minimum draft gear) of this device for full protection of lading and trailer.



solves railroad loading problems



Now... the new **ACF** Trailer-Hitch solves many problems of railroad-trailer service. The simplicity and security of this new device now permits trailers-on-flat-cars in consist with regular freight service.

Requiring no attachments on the trailer, the **ACF** Trailer-Hitch provides fast, simple securing of *any* standard trailer to the flat car. It retracts to allow tractor and trailer to pass over easily in loading and unloading. With a portable power wrench *one man* raises and locks the hitch in 2¾ minutes—as compared to double the time for a *three-man* crew with previous methods.

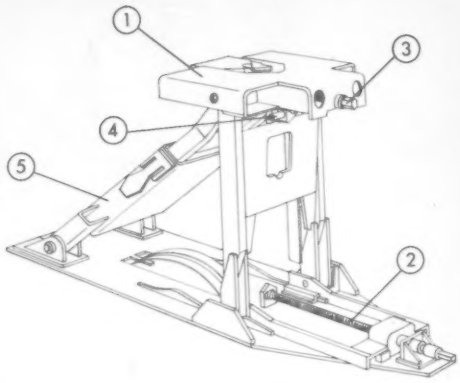
The **ACF** Trailer-Hitch secures the trailer at the king-pin... generally recognized to be the strongest point. Powerful cushioning device in the hitch protects the trailer and its cargo from impact damage in transit and interchange.

Now available for installation on your present cars as well as on **ACF** standard flat cars and *Adapto* cars. For more information and operating details contact any **ACF** office.

acf

SETS THE PACE IN RAILROAD EQUIPMENT

Easily installed on any standard flat car or *Adapto* car, the acf Retractible Trailer-Hitch makes quick work of loading and unloading any standard highway trailer.



DETAILS

1. *Centering and locking plate* engages trailer "fifth wheel".
2. *Elevating screw* requires only 130 foot-pounds torque to raise centering and locking plate and jack trailer.
3. *Locking screw,* operated by wrench, locks hitch and trailer together.
4. *Safety lock handle* prevents accidental unlocking, provides absolute safety.
5. *Cushioning device.*

SPECIFICATIONS

Length	9′2¼″
Width	2′4½″
Height (retracted)	8″
Height (raised)	3′11″
Cushioning Capacity	40,000 ft.-lbs.
Maximum torque required to jack trailer (60,000 lb. trailer)	130 ft.-lbs.

Two booklets available detailing *test results, specifications, and operating instructions. Write, wire, or phone any* acf *office.*

acf **AMERICAN CAR AND FOUNDRY DIVISION**

acf Industries, Incorporated, 30 Church Street, New York 8, N.Y.

Sales Offices: Chicago · St. Louis · Cleveland · Philadelphia · Washington, D. C. · San Francisco
Plants: Berwick, Pa. · Milton, Pa. · Huntington, W. Va. · St. Charles, Mo. · St. Louis, Mo.

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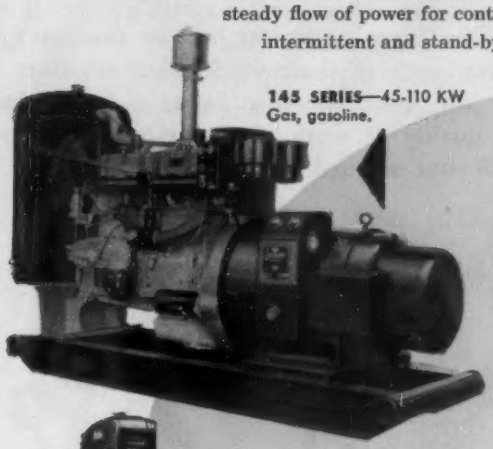
WAUKESHA

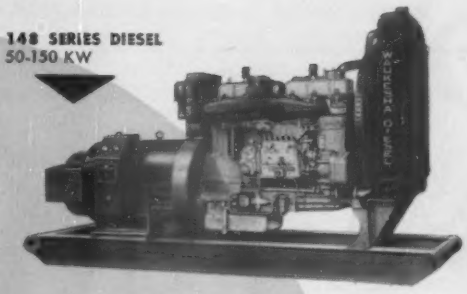
Waukesha now offers you a superb line of Enginators—backed by half a century of experience in building heavy-duty internal combustion engines and electrical equipment. Designed for reliable performance on all types of fuel, these Waukesha power units supply accurately balanced engine and generator combinations in applications requiring a smooth, steady flow of power for continuous, intermittent and stand-by duty.

Industrial ENGINATORS®

50-600 KW • NATURAL GAS LPG • GASOLINE • DIESEL

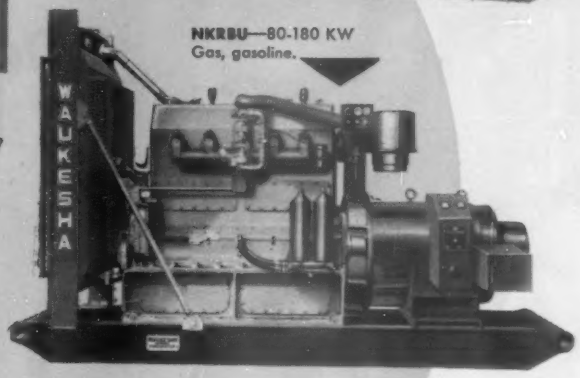


145 SERIES—45-110 KW
Gas, gasoline.

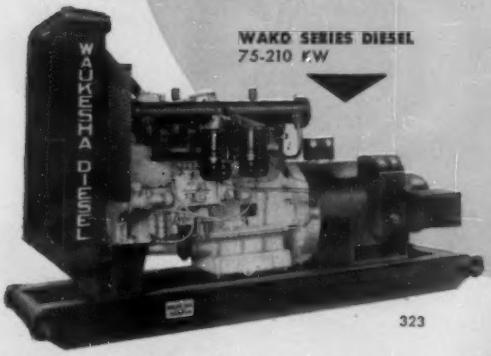


148 SERIES DIESEL
50-150 KW

WAK SERIES—75-170 KW
Gas, gasoline.

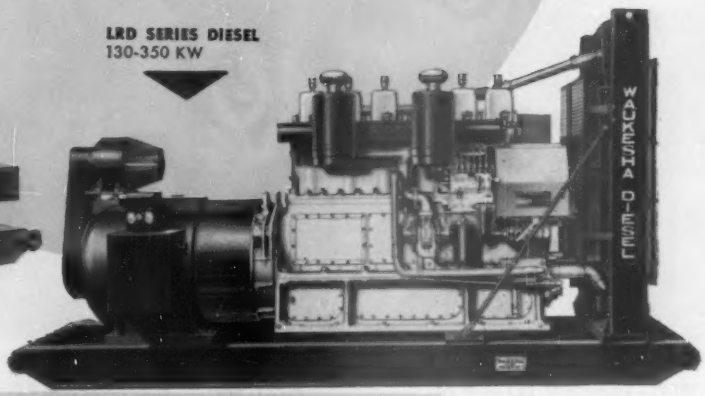


NKRBU—80-180 KW
Gas, gasoline.



WAKD SERIES DIESEL
75-210 KW

323



LRD SERIES DIESEL
130-350 KW

WRITE FOR BULLETINS FOR THESE AND OTHER MODELS.

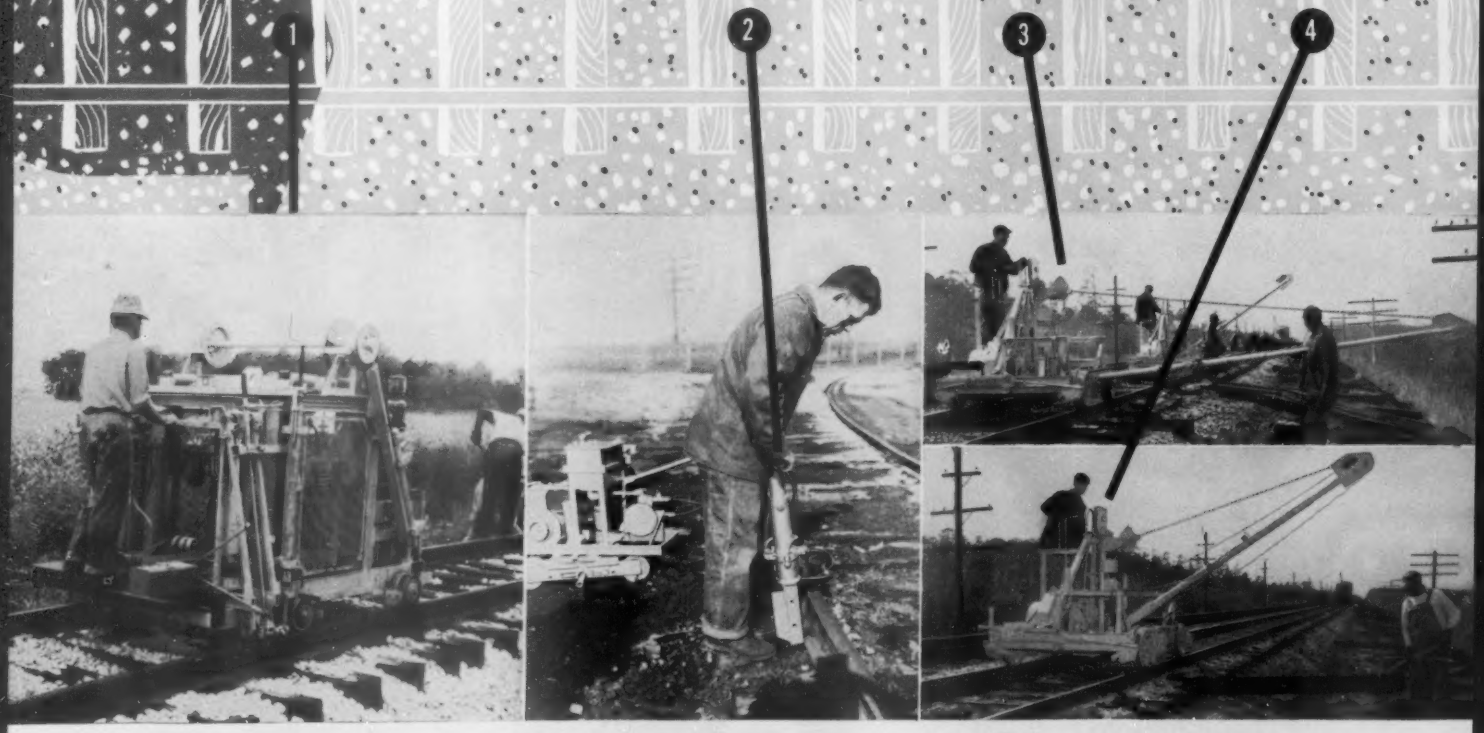
WAUKESHA MOTOR COMPANY • WAUKESHA, WISCONSIN *RAILWAY DIVISION*

PUT THESE "Mechanical in your Raising

Reduce time and save money in your raising and tie renewal operations by putting Nordberg "Mechanical Muscles" to work.

From the Tamping Power Jack on through the Trakliner, each of these track machines does a specific job better, faster, at lower cost with improved quality of work. Cost savings will soon write off your original investment.

© 1956, Nordberg Mfg. Co.



1 NORDBERG TAMPING POWER JACK . . . this one-man machine combines features of the Nordberg Power Jack and Gang Tamper. Designed for use ahead of gang tamping equipment, the self-propelled Tamping Power Jack raises track quickly, and solidly tamps ties to hold raise.

2 Next comes the NORDBERG HYDRAULIC SPIKE PULLER, a simple, versatile machine that quickly and economically pulls spikes on either rail . . . followed by . . .

3 The NORDBERG GANDY, here being used to quickly pull old ties for replacement.

4 Second GANDY in this gang is used to save time in rapidly inserting new ties . . . another example of the versatility of this self-propelled machine.

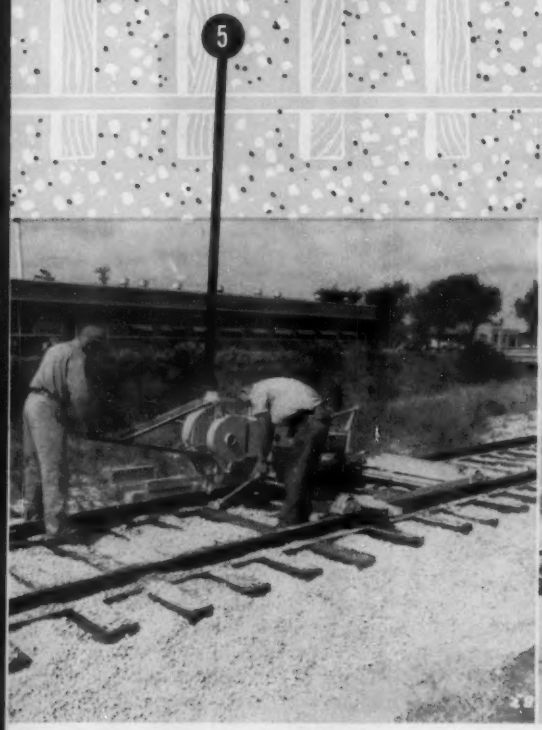
NORDBERG *Muscles*® to work and Tie Renewal Gangs

The Nordberg "Mechanical Muscles" shown here at work on some of the Nation's leading railroads, have been designed, built, and proved in use with the cooperation of track maintenance men—and typify the continuing research and development made by Nordberg to provide the ultimate in modern maintenance machines for modern railroads.

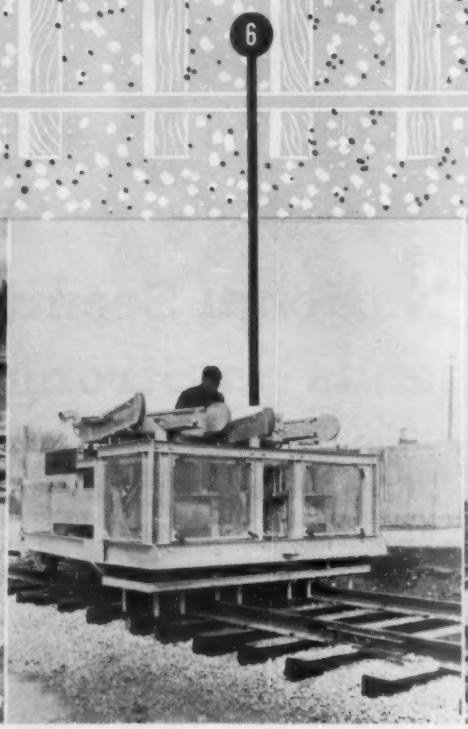
Other Cost-Cutting Nordberg *Mechanical Muscles*:
ADZING MACHINE • BALLAST ROUTER • POWER JACK • CRIBEX® • BALLASTEX® • MECHANICAL SPIKE PULLERS • TIE DRILL • SCREENEX® RAIL DRILL • RAIL GRINDERS • TRACK SHIFTER • DSL® YARD CLEANER • DUN-RITE® GAGING MACHINE • POWER WRENCH

Call or write for further information and literature.

NORDBERG MFG. CO., Milwaukee, Wisconsin



5 Here, the NORDBERG SPIKE HAMMER takes over to drive spikes straight and to correct depth . . . new special carriage permits spiking of both tie ends with one spike hammer.



6 Next comes the NORDBERG AUTOMATIC GANG TAMPER . . . operated by one man, this machine assures uniform quality tamping of every tie, every time, in any ballast.

7 Final machine in this gang is the NORDBERG TRAKLINER . . . the one-man, self-propelled track lining machine with two-point rail contact for extremely accurate, kink-free line. Faster, more accurate than any other lining method.

R1255-R

A message from a distinguished soldier: **GENERAL JAMES A. VAN FLEET**

Why our National Security Depends on Strong Railroads

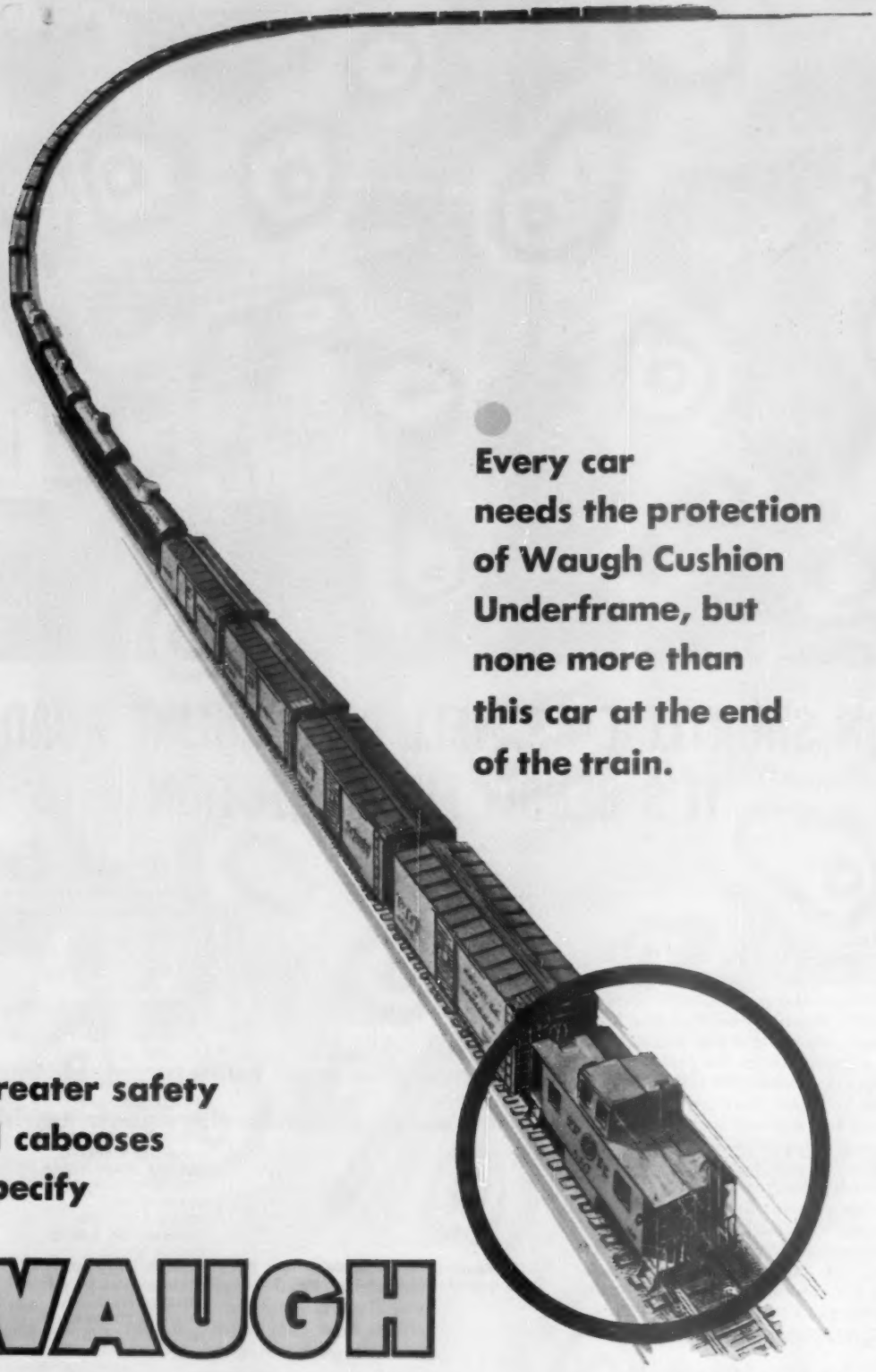
"The railroads of the United States are a great basic military asset. They are as much a part of the military strength of the nation as our Army, Navy, Air Force, and Marines, because none of these great armed services could long operate without the logistical support which railroads provide."

So says General James A. Van Fleet, U. S. Army (Ret.), former Commander of the 8th Army in Korea.

"Therefore," he points out, "we have now and always will have vital need for strong, vigorous, progressive railroads, with reserves of traffic capacity and trained manpower upon which the Armed Forces can draw for their own combat and strategic requirements. *To maintain such a rail plant in readiness, it must be used in peacetime.*"

That's one vital reason why it is important to you – and to the nation – that our public policies should give to railroads equal treatment and opportunity with other forms of transportation. Then each form can do for you the things which it does best, and America's modern railroads will be able to serve you with increasing efficiency and economy.

ASSOCIATION OF
AMERICAN RAILROADS
WASHINGTON, D. C.



Every car
needs the protection
of Waugh Cushion
Underframe, but
none more than
this car at the end
of the train.

For greater safety
on all cabooses
. . . specify

WAUGH

Cushion Underframe

WAUGH EQUIPMENT COMPANY, New York · Chicago · St. Louis · Canadian Waugh Equipment Co, Montreal

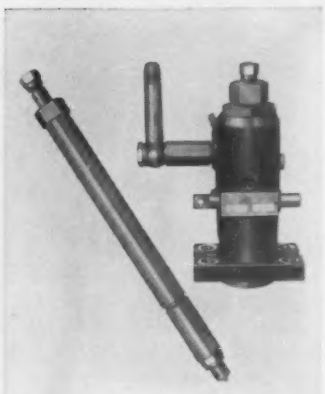
ON SHORTLINE AS WELL AS MAINLINE ROADS IT'S BENDIX FUEL INJECTION

All over the country shortline railroads like those listed here are giving 'round-the-clock service that helps make the American railroad system the envy of the world.

Using 70-ton and 95-ton General Electric road switchers powered by Cooper-Bessemer engines with Bendix* Fuel Injection Equipment, these shortline roads maintain high operating standards in the performance of their important work.

Bendix is proud that its fuel injection equipment has received such high endorsement from so many shortline railroad operators.

It furnishes further evidence that when dependable, efficient, and economical operation is a must Bendix is the logical choice for fuel injection equipment. SCINTILLA DIVISION OF BENDIX AVIATION CORP., SIDNEY, N.Y. EXPORT SALES AND SERVICE: BENDIX INTERNATIONAL DIVISION, 205 EAST 42ND ST., NEW YORK, N.Y. *REG. U.S. PAT. OFF.



This Bendix pump and nozzle are used on the type of road switcher pictured above.

Partial list of shortline roads using Bendix Fuel Injection Equipment

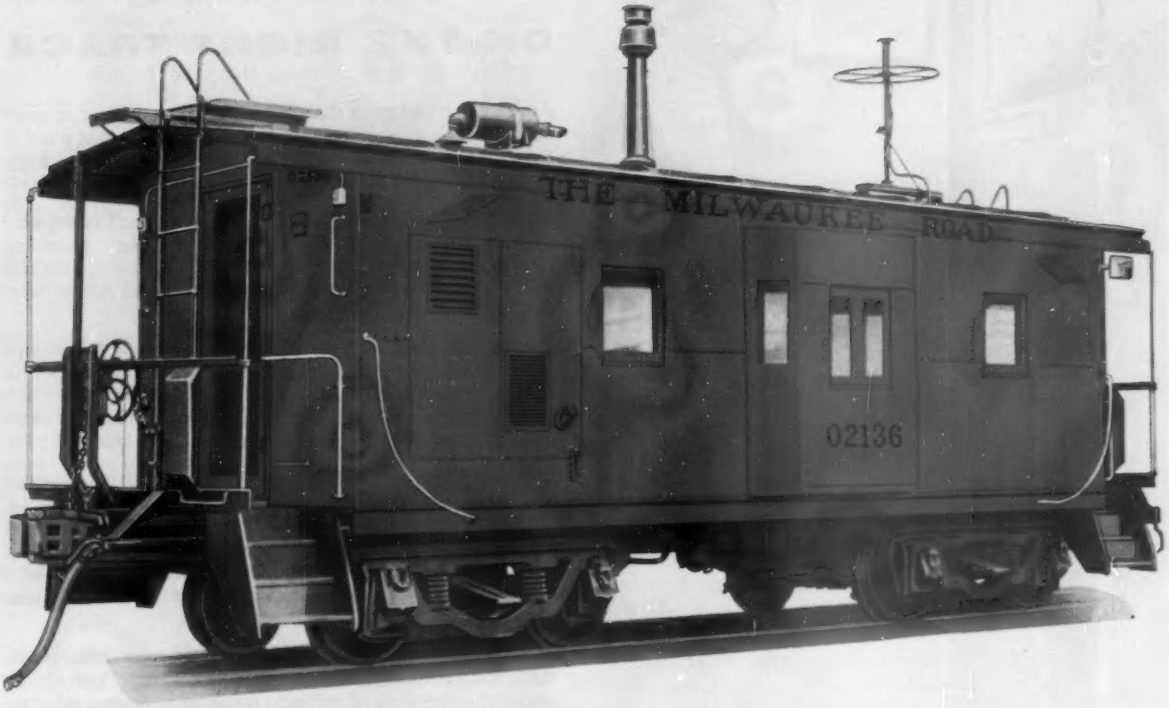
ALBANY & NORTHERN
ARKANSAS & OZARKS
BALTIMORE & ANNAPOLIS
BARRE & CHELSEA
BELFAST & MOOSEHEAD LAKE
COLORADO & WYOMING
DES MOINES & CENTRAL IOWA
EAST ERIE COMMERCIAL
FT. DODGE, DES MOINES & SOUTHERN
FRANKFORT & CINCINNATI
GEORGIA NORTHERN
GREENVILLE & NORTHERN
HAMPTON & BRANCHVILLE
LANCASTER & CHESTER
LIVE OAK, PERRY & GULF
MISSISSIPPI EXPORT
MOBILE & GULF
MUNCIE & WESTERN
NORTHAMPTON & BATH
RAHWAY VALLEY
SANFORD & EASTERN
SOUTH GEORGIA
TALLULAH FALLS
VALDOSTA SOUTHERN
WASHINGTON & OLD DOMINION

Scintilla Division

Bendix AVIATION CORPORATION

ULTRA-MODERN

Caboose Cars



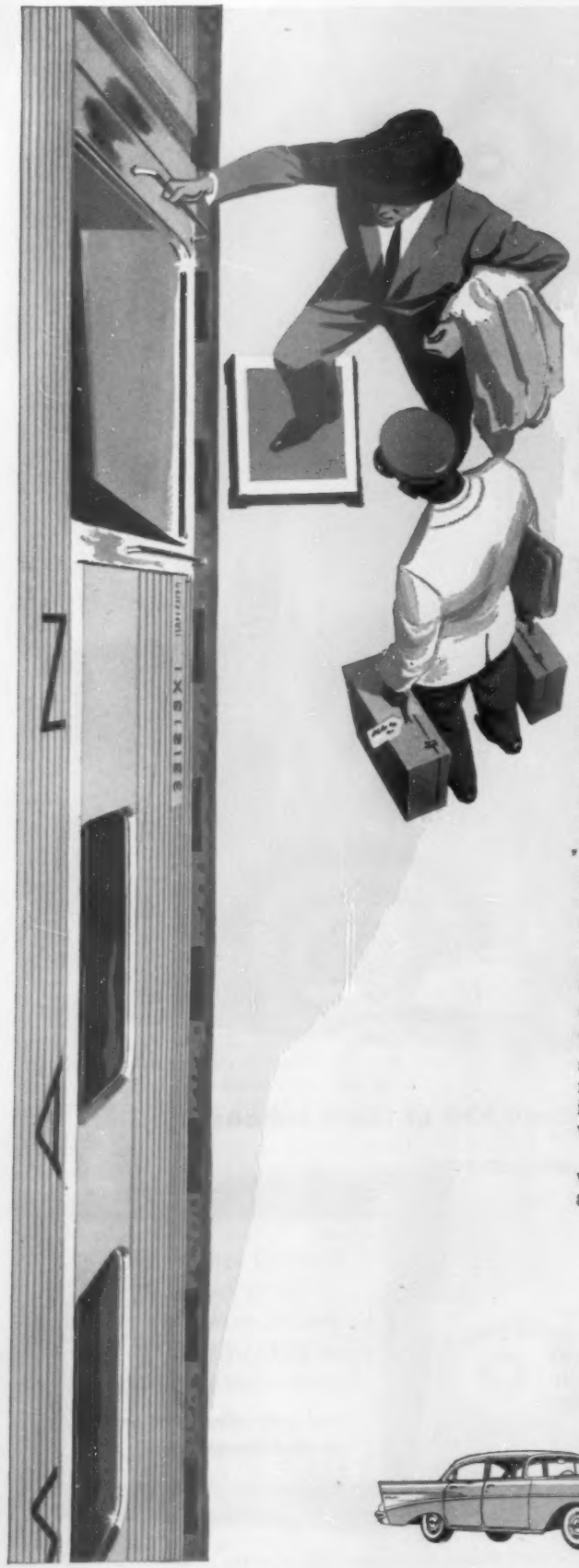
The Milwaukee Road has purchased 100 of these cabooses which include such special features as:

CUSHION UNDERFRAME
TWO-WAY RADIO
ELECTRIC POWER
REFRIGERATOR
MOST MODERN TRUCKS
and many other riding and comfort conveniences

We thank those attending the Coordinated Mechanical Association's Convention for the interest shown in this car. If you are interested in literature or specifications, we would be pleased to receive your inquiry.

THRALL

CAR MANUFACTURING COMPANY • *2602 Wallace St., Chicago Heights, Illinois*



LET'S PUT AMERICA'S MOTORISTS ON THE RIGHT TRACK

Americans travel more than 500 billion passenger miles every year—in their cars. Why? Simply because they want a car at their destination. And that kind of mileage makes the highways your biggest and toughest competitors.

You can help win highway travelers back to rail travel now with the Hertz Rail-Auto Travel Plan. This Hertz-pioneered plan offers motorists real travel convenience: swift, comfortable trains plus a new Powerglide Chevrolet Bel Air or other fine car to drive as their own when they arrive.

Promote it. Urge *all* your ticket agents to ask this simple question every time they sell a ticket: "May I reserve a Hertz car for you at your destination?" Once passengers try the Hertz plan, they'll use it again and again. That will mean repeat rail business for you! That's The Hertz Idea!

It's convenient and low in cost. Alert railroad management already is using it to win new and profitable customers. And, as a personal bonus-incentive to ticket agents, Hertz pays them *10% commission* on the total rental charges. *Plus,* Hertz has installed personal service counters or direct "Call a Car" phones in terminals on concession (and many more are coming).

You'll get lots of help from Hertz. You'll have free displays, signs and literature. You can capitalize on Hertz' tremendous national promotion of rail-auto travel in your own advertising. Remember, Hertz is the world's largest car rental service, with offices in over 700 cities worldwide.

If you are interested, and would like to know more, call or write Hertz for facts, forms and promotional materials. The address: Hertz Rent a Car, 218 S. Wabash Ave., Chicago 4, Ill.

More people by far...use

HERTZ

Rent a car

How to Combat Transport Socialization

The transportation business is a partly socialized business—and the part of it which is conducted under the auspices of socialism is growing much faster than the private enterprise part.

Anyone can test the correctness of this statement merely by observing what is going on in practically any urban community in the country. Construction of transportation facilities is going forward at an unprecedented rate—and all but a small fraction of the new installations are being paid for by taxation. There are more and more superhighways, with supporting bridges and tunnels. Airports get bigger and more elaborate all the time. And more and more rivers and creeks, including the St. Lawrence river, are becoming canals designed to handle heavy commerce—all as the result of governmental (as opposed to private) initiative.

It is true, of course, that the railroads are making substantial capital improvements all the time. It is also true that a lot of private capital is being invested in pipelines—and in the various kinds of vehicles (trucks, planes, ships and barges) which make use of governmental transportation property (highways, airports, waterways) as a place of business. Private capital is, thus, not abandoning the transportation business—far from it—but the private investment part is being dwarfed by the magnitude of the governmental investment.

U.S. Outlays vs. Railroads'

In a table herewith are presented figures on gross capital expenditures of the Class I railroads for the past eleven years. In a parallel column are shown the expenditures of the federal government for the furtherance of highway, waterway and air transportation for the same period. It will be noted that these capital expenditures by the federal government in recent years are substantially in excess of the railroads' capital expenditures for the improvement of railroad plant.

These figures in the table represent "gross capital expenditures"—that is, they do not take into account the capital cost of old structures and equipment which are retired when new plant is provided. Most of the federal expenditures represent brand-new plant (not replacement). As a consequence, they are an indication of additional facilities being provided for the users of agencies of transportation other than railroads. In sharp contrast, in the case of the railroads, a major part of capital expenditures represent replacement of retired plant.

Federal government expenditures for transportation improvements are only a part of the total government donation. Most of the outlays for improved highways, airports and waterway terminals are made by state and local governments. It is also a fact of the very greatest significance that there is some disposition on the part of discerning public officials to try to make some of this government-owned transportation plant partly self-supporting, by special levies on the users.

There is no reason, for instance, why an airport owned by a municipality should not be made wholly self-sustaining—by fees levied upon the users of the airport. These fees should be large enough to defray all operating, maintenance and capital charges; and to earn the municipality a profit, at least sufficient to offset the taxes the municipality is losing by operating the airport under public ownership instead of private ownership. There should be a constitutional amendment to remove from state and municipal bonds the exemption they now enjoy from the federal income tax.

Two Lines of Defense

If all governmentally owned transportation property were put under such a regime of strict self-support, it would no longer enjoy special privileges not accorded to private transportation investment. All true friends of private enterprise should acquaint themselves with the facts regarding the spread of socialism in transportation—and endeavor wherever and whenever they can to use their political power to slow down, or halt altogether, this rapid advance of transport socialization.

But it will not be of any competitive help to the private enterprise part of transportation (e.g., the railroads) if the socialized part (highways, waterways, airways) is made self-sustaining—unless the private enterprise part goes out aggressively to reflect its relative economy in its competitive rates, to a far greater degree than it has done yet. This is the number one need.

Year	RR Gross Capital Expenditure (Millions)	Federal Budget Transport Outlays (Millions)	Year	RR Gross Capital Expenditure (Millions)	Federal Budget Transport Outlays (Millions)
1946	$562	$275	1951	1414	978
1947	865	600	1952	1341	999
1948	1273	709	1953	1260	1143
1949	1312	933	1954	820	1174
1950	1066	1010	1955	908	1[illegible]
			1956	1309	1406

The railroad figures are for calendar years and the governmental totals are for years ended June 30. The 1956 railroad total is an estimate and both 1955 and 1956 government totals are estimates. The government figures represent totals of (1) aid to navigation, (2) provision of highways and (3) promotion of aviation. They do not include promotional expenditures on the merchant marine (overseas shipping).

ROLLING LABORATORY consisting of four GE units with Cooper-Bessemer turbosupercharged engines has been operating in freight service on the Erie since 1954. In this 490-ton experimental locomotive General Electric has tested many components incorporated in "universal" locomotives—and experiments continue.

From This "Laboratory" . . .

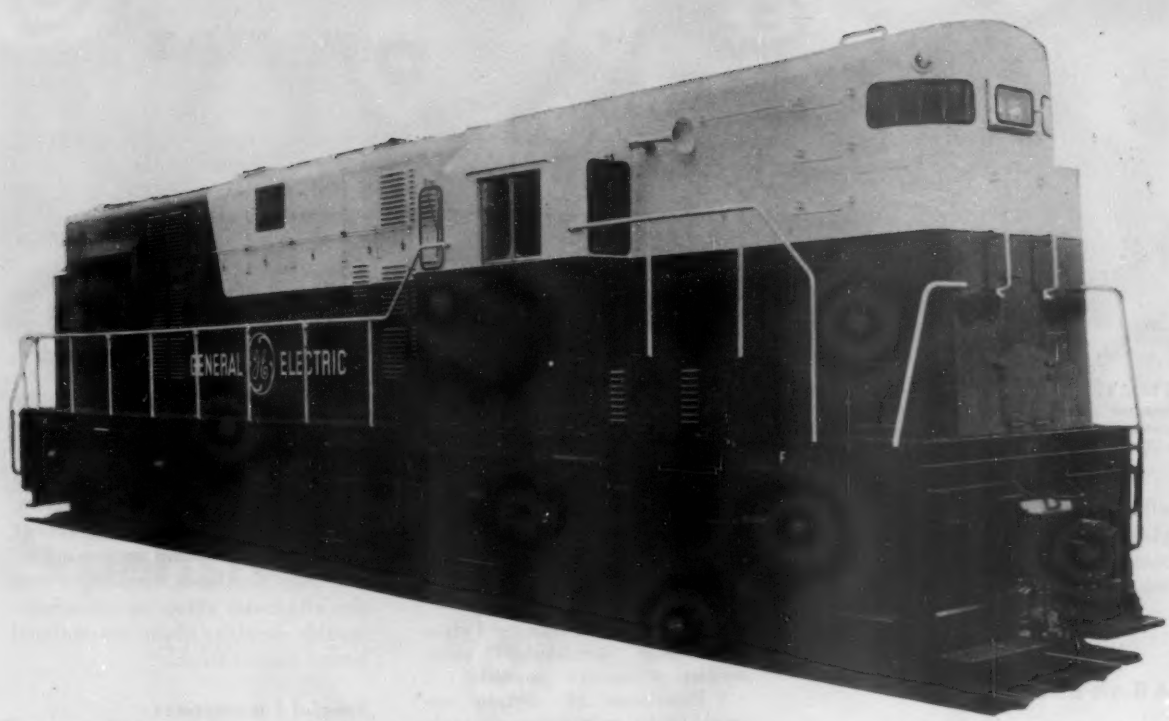
By D. R. MEIER
Locomotive and Car Equipment Department
General Electric Company

A mobile laboratory went into service on the Erie in September 1954. It is a four-unit 6,000-hp diesel-electric locomotive built by General Electric for developmental test purposes. There are two A units—one of 1,200 hp and one of 1,800 hp—and two B units with the same horsepowers.

Assigned to regular freight service in the 400-mile territory between Salamanca, N.Y., and Marion, Ohio, this locomotive hauls trains of 5,000 to 7,000 tons at speeds up to 55 mph over a rolling profile with grades up to 1%. In the first 20 months of its operation it accumulated 220,000 miles of service.

Servicing and maintenance are performed by Erie personnel, but the operating agreement with the railroad makes it possible for new developments to be tested under actual service conditions, in a location convenient to the builder's factory and engineering staff.

Out of this experience General Electric has developed components of its new "universal" line of diesel-electric locomotives, primarily intended for the export market. This design is readily adaptable to most of those highly variable limitations under which locomotives must operate overseas, which have militated against wide utilization of "standard" U.S. diesel locomotives abroad.



DEMONSTRATOR, rated at 1,800-hp, is largest and heaviest of the universal locomotive line. Designed to operate at altitudes up to 14,000 ft, it is powered by a Cooper-Bessemer, V-type, supercharged diesel. With four optional gear ratios available, it has a maximum speed of 65 mph; continuous tractive force of 63,000 lb.

Came a "Universal" Locomotive

Aimed at applications in all parts of the world are nine models of General Electric switchers and road switchers, adaptable to highly variable requirements in different countries

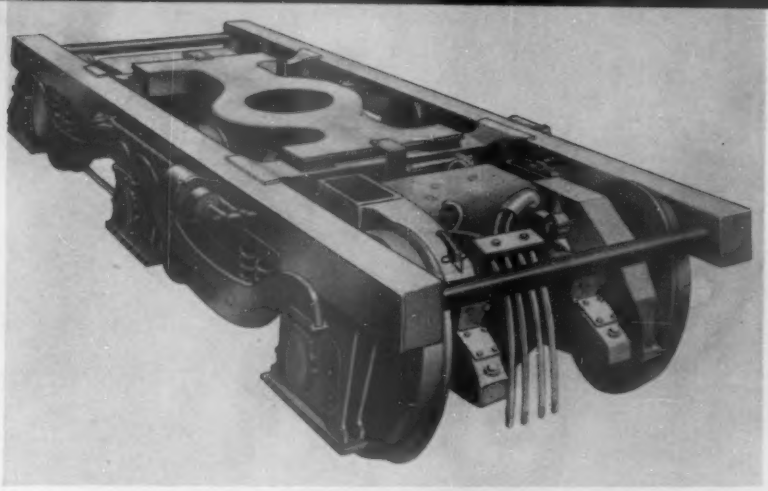
In the United States the motive power "revolution" has been accomplished largely with well-developed standard types of locomotives. All have the following basic characteristics: One standard gage; essentially one clearance diagram (10-ft by 14-ft 6-in.); axle loads from 55,000 to 65,000 lb; and horsepower ratings from 1,500 to 2,400 for road units, and 600 to 1,200 for switchers. Builders and users of locomotives reap benefits from so high a degree of standardization.

Standardization of locomotives for other parts of the world presents a more complex problem. The favorable conditions which exist in the United States are lacking. Some of the major differences in axle loading, clearance limitations, coupler heights and track gages are suggested by the accompanying tabulation. This selection is only representative and does not give a complete picture of all the variations that may be encountered.

While some railroads may find it feasible to make changes in permanent way and structures to take better advantage of standardization, large-scale moves in this direction may be difficult. In most cases locomotives will be selected to fit the railway. Naturally, these locomotives

DIFFERENCES IN MAJOR LOCOMOTIVE DESIGN CONSTANTS

- *Track Gage*—36-in. to 66-in.
- *Coupler Height*—29½-in. to 40½-in.
- *Overall Height*—12-ft to 14-ft 7-in.
- *Overall Width*—8-ft 8-in. to 10-ft 1-in.
- *Minimum Axle Loading*—26,400-lb to 40,500-lb
- *Brakes*—(a) Independent and automatic air on locomotive and train.
  (b) Independent air on locomotive and vacuum on train.
  (c) Combined independent and automatic and vacuum brakes.
  Dynamic braking may be added to any of these.
- *Coupler and draft gear*—Either American or European type, or "multi" coupler arrangement.
- *Altitudes*—From sea level to 14,000-ft
- *Ambient Temperatures*—Up to 120-F maximum



FLOATING BOLSTER mounted on rubber pads takes the place of more complicated arrangements for providing lateral motion. Two-and three-axle trucks are built this way for the universal line—all can accommodate standard traction motors. Possible gages range from 36 to 66 in.

will be a compromise between complete individuality of design and complete standardization. Every step toward standardization that can reasonably be taken will prove beneficial.

A Basic Locomotive Design

Analysis of data from worldwide applications of electric and diesel-electric locomotives indicated the possibility of designing a basic locomotive type, from which variations can be built within certain limits.

The field studies made on the "mobile laboratory" and other experience indicate best results in the direction of standardization can be achieved by creating a universal locomotive design readily adaptable to the majority of the requirements that will be encountered. This design should include:

- **Adaptability to various gages with gage determined before manufacture.**
- **Adaptability to various coupler heights and types.**
- **Ability to meet composite clearance diagram which will permit operation on a majority of railroads.**
- **Cab design to permit operation under a wide variety of conditions, such as switching and road service with either end leading. The cab that has found wide acceptance in the United States for this purpose is the road-switcher type.**
- **Overall design for minimum weight consistent with adequate mechanical strength.**
- **Ability to maintain low weight per axle—the design will have greater adaptability if the superstructure is arranged so that it can accept either two-axle or three-axle trucks, without modification.**
- **All weight on driving axles to achieve maximum use of power and weight.**
- **Utilization of standard electrical and mechanical components wherever possible.**
- **Provision of certain options (with minimum disturbance of basic design) to suit differences in the requirements of individual railways. These options should include two-station control, multiple-unit control, dynamic braking, train-heating steam generators, combined air and vacuum brake systems.**
- **Emphasis should be placed on simplicity and reliability of components.**

Subject to these requirements, a line of universal locomotives covering a range of 400 to 1,800 hp has been designed by General Electric. (Brief descriptions and ratings of these locomotives appeared in Railway Age, April 16, p. 47.) Locomotives of this line will be applicable over a wide variety of railways with different permanent ways, structures, and operating conditions. Their design and adaptability allows them to be used for all types of service, minimizing the total number of locomotives needed. Universal design also yields other economies—standardization, reduced first cost, lower maintenance expense, and servicing.

All units, except the small switchers, can be built with either 2-axle or 3-axle trucks. Initial cost and maintenance expense are pared by using standard designs and equipment throughout. The 400- and 600-hp units are powered by Caterpillar engines, and Copper-Bessemer engines are used on the 990-, 1,320- and 1,980-hp units. These diesels are built specifically for locomotive service. The GE-761 traction motors are used except on the 1,980-hp, 4-axle locomotive. This model, designed for the heaviest duty, is equipped with the GE-752 traction motor. Power requirements of all nine sizes of locomotives are met with only three sizes of traction generators.

All locomotives of this new line are road-switchers, except the 400- and 600-hp units, which are of the switcher design. Cabs and platforms are of welded construction throughout. All trucks are designed with a "floating bolster" suspension system. The bolster is mounted on rubber pads to permit lateral motion. This not only increases flexibility, but also eliminates numerous often inaccessible members of the conventional lateral motion truck.

Special Locomotives

Where standard designs cannot possibly be used, locomotives can be designed and built to meet any reasonable special condition encountered. Examples of such conditions are extreme limitations on weight per axle, specially restricted clearances, odd track gage, unusual altitude conditions, and coupler height outside the ordinary range. Departures from standard designs will be reflected in some increase in costs. Extra costs, can, however, be minimized through cooperation of the builder and the railway:

1. Coordinating specifications and design with a view to using standard electrical and mechanical components wherever acceptable. This will permit full advantage to be taken of reduced cost through repetitive manufacture and elimination of extra design work. It will also give the railway the advantage of a minimum number of special parts to operate and maintain.

2. Arranging, when possible, to build a quantity of locomotives at the same time. Design costs and starting costs are independent of the number of units produced. The greater the quantity of locomotives, the less effect such costs have on the unit price.

3. Taking full advantage of well-known design principles to attain the special objectives required.

HOMESTAKE TUNNEL, straddling the Continental Divide at an elevation of 6,328 ft, the highest level reached by the Northern Pacific, is bypassed by a line change in an open cut blasted through solid rock. A future line change (shown at the left) will bypass Highview tunnel when conditions make that desirable.

LINE CHANGE DOES IT . . .

Expensive Tunnel Eliminated

Continental Divide bore bypassed to cut cost of upkeep and lining renewal

The Northern Pacific has constructed its third crossing of the Continental Divide. The first two employed tunnels. The third, put into service recently, was laid in a deep open cut on a line change. Built at a cost of $460,000, it replaces the track through Homestake tunnel, 10 miles east of Butte, Mont.

The new line was made necessary by gradual deterioration of the Homestake tunnel. When it was originally built in 1890, the bore was 706 ft long and had timber-arch linings at both ends and for a length of 45 ft at the center. Except where the ends approach the surface, the entire bore was through solid rock consisting of syenite, granite and intermediate material.

However, time and weather influence crumbling of even the hardest rock. Although most of the exposed surface in the unlined portion of the tunnel is granite, there are some areas nearly as hard but subject to slow flaking. Some narrow seams of soft rock are very susceptible to disintegration. The lined sections contained a large portion of syenite rock, subject to surface disintegration, and there were other seams from which decomposed granite had dropped off.

Maintenance of the unlined portions consisted of continuous scaling. In the lined sections the crumbling of the rock, the falling of large solid boulders and the formation of voids above the lining material created irregular and eccentric loading and necessitated costly replacement of the timber.

Most of the trouble in maintaining Homestake tunnel occurred at the east end. In 1908 a slide occurred at the east portal, and the portals at both ends were extended to catch material from above the tunnel. Another slide occurred at the east end in 1923 which destroyed the entire portal section. Although some thought was given at that time to replacement of the timber with concrete, the timber section was restored.

More Troubles—and a Decision

As the result of a cave-in at the east portal in 1948, the tunnel was shortened to 679 ft and portal sheds were constructed at each end to catch weathered material from the slopes above the portals. The tunnel

NEW LINE was cut through tombstone granite to a depth of as much as 80 ft. Base of cut was made 60 to 64 ft wide and the slope on the north was made flatter than that on the south. West portal of Homestake tunnel is at left.

then consisted of 31 ft of portals, 280 ft of timber-arch lining, and an unlined portion 368 ft long.

Between 1948 and 1954, various propositions were advanced for solving the difficulties at the tunnel on a more permanent basis. The suggestions included construction of concrete linings, "daylighting" the tunnel with an open cut, and bypassing it with a line change. In 1954, the timber near the west portal got out of line due to pressure of the overburden on the timber lining. This was corrected. Later, some minor slides demolished a few of the timber-arch segments, and these had to be replaced.

These occurrences stimulated a final review of all propositions and estimates. It was decided to eliminate further tie-ups of traffic and to reduce maintenance costs by constructing a line change to bypass the tunnel. A contract for the grading was let to the Lelonde Company, Sydney, Mont., and work was started on May 13, 1955.

The line change, 3,505 ft in length, cuts right through the East Range of the Rockies, about 230 ft south of the existing tunnel. It shortens the route by 125 ft. The construction work consisted primarily of excavation through granite to a maximum depth of 80 ft, which necessitated a large amount of shooting. The base of the cut was made 60 to 64 ft wide and the slopes were made ½ to 1 on the south and ¾ to 1 on the north, the flatter slope allowing for some accumulation of snow.

How Work Was Done

The project also required relocation of a few yard tracks, moving of communication lines and other facilities, construction of a new station shelter shed and platform, and closing the portals of Homestake tunnel.

The rock was broken up for loading by drilling and blasting. In general, the blasting consisted of multiple shots from 200 to 260 holes, although up to 430 shots were detonated at one time. The holes were drilled 2½ in. in diameter, usually 11 ft deep, and spaced at 5- to 6-ft centers. Work progressed rather slowly. Up to 3,100 cu yd of material was moved per day without damage to the existing tunnel and little to surrounding structures.

The excavated material, in excess of what was required to build the railroad embankments at the ends of the cut, was used to fill a ravine south of Highview tunnel, a short distance to the west. This fill will later serve as the roadbed for another projected line change to eliminate the second tunnel if that becomes necessary. A total of 350,000 cu yd of material was excavated in constructing the Homestake line change. The new track was laid by railroad forces, using 115-lb and 132-lb rail.

Railroading

After Hours

by James G. Lyne

Editor, Railway Age

Big Lettering

I have a pleasant note from President Allan MacNamara of the Soo Line about jumbo-sized lettering on box cars. He believes I am right in the opinion I expressed that the Soo is the first railroad to adopt big lettering. He goes on to say:

"We started putting the big four-foot lettering on the first cars we built after I came back in 1950, and we have been putting them on all new and repainted cars ever since."

To my notion, this big lettering—and brighter colors—on freight cars is the most conspicuous improvement in railroad appearance that has come along since the first streamlined passenger trains.

In some ways, better painting and lettering of freight cars may have even greater public impact than more attractive passenger cars, because there are so many more of them.

A Kids' Conductor

In a C&O coach on No. 2 between Cincinnati and Huntington the other day, I noticed the conductor showing a passenger—a little girl—a toy balloon, shaped like an oversized apple. He rubbed the balloon on his shoulder and touched it to the underside of the baggage rack, and it adhered.

The youngster was delighted; and even more so when the conductor made a present of the balloon to her. I got to talking to this conductor, Jim Miller by name, and he told me he makes a regular practice of giving balloons to the kids who ride with him. He buys the balloons by the gross. Nothing like this to make a train ride something really memorable to the small fry. Parents appreciate it too—as they do anything to keep the kids amused and occupied.

Hard-to-Find Alibi

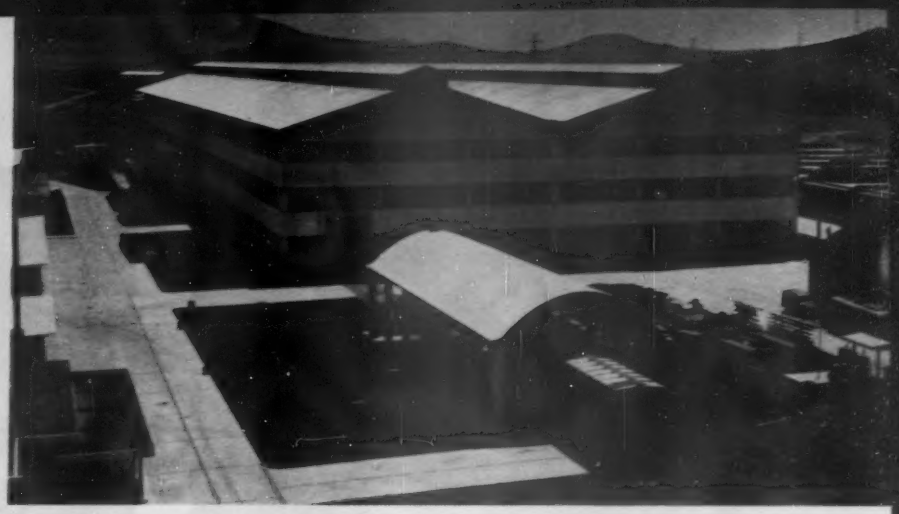
After some speaking I did the other day—in behalf of greater freedom from regulation and socialized competition for the railroads—the traffic manager of a large manufacturer came up and put me on the griddle (in private, praise be).

He wanted to know why it was that the railroads were seeking policies to get more traffic when they didn't have the cars to handle the traffic now offered. My answer to that was that, with better regulatory laws, railroad traffic and earnings would never again fall off the way they did (say) in 1954. With improved and more dependable earnings—railroads would order more cars in slack times than they have been doing; and, hence, would not be so shy of them when traffic is heavy.

But then he asked me the $64,000 question and I flunked it. The question was:

"Why is it that it takes me 6 days and up to get a car moved 200 miles?"

The answer can't be a lack of money, because it oughtn't be any more expensive to keep cars moving than to let them lie around, missing available connections.



BUILT at a cost of $2,360,000, this first freight car building plant in Mexico has a capacity of six finished all-steel box cars per working shift. Located at Irolo, Hidalgo, it is controlled by the government. It is now working on an order for box cars for the National Railways.

U. S. MATERIALS USED IN . . .

First Mexican Car Plant

By ALFONSO HERNANDEZ LOZANO
Assistant General Manager
Pacific Railroad of Mexico

Delivery recently of the first of 460 50-ton box cars to the Pacific Railroad of Mexico highlights the production capacity of Mexico's first freight car building plant. The facility is at Irolo, Hidalgo—a new government-sponsored industrial center, about 62 miles east of Mexico City.

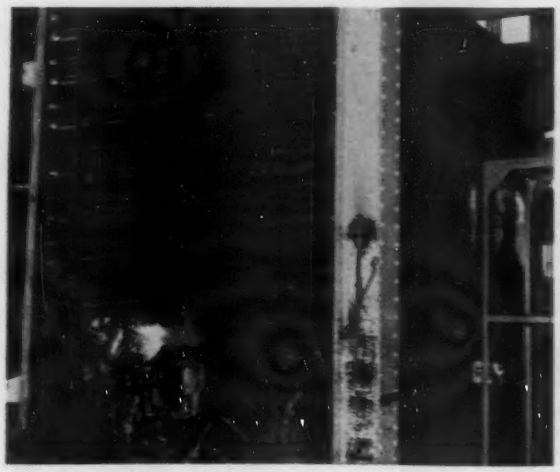
Since the rehabilitation program of the Pacific is largely financed through a $61 million loan from the World Bank, bids on the cars had to be secured from manufacturers in countries all over the world. On the basis of quality, price and delivery time, and with the approval of the bank, the order was placed with the National Freight Car Building Plant.

Major Components from U.S.

Costing about $2,360,000, the plant produced its first car in December 1954. Machinery and equipment concerned with the steel portions of the cars came wholly from U.S. suppliers, while equipment for the woodworking shop was acquired in the Netherlands. Capacity is six cars per eight-hour shift.

About two-thirds of the material entering into the fabrication of the cars themselves is of foreign—mostly U.S.—manufacture. All of the 560 personnel of the plant are Mexican.

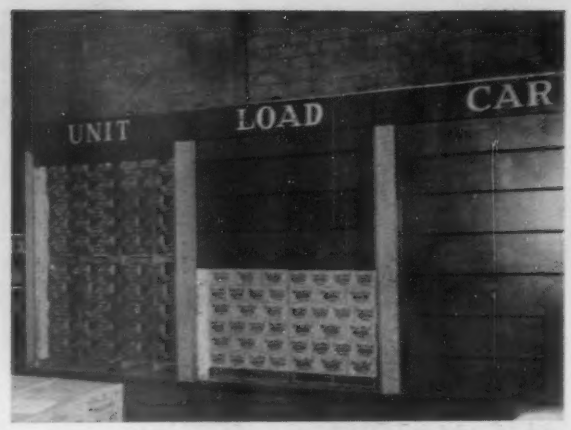
Control of the operating company is in the Mexican federal government, with participation by various national financial groups. Capacity operation for the next few years has been assured by a recent order of the National of Mexico calling for the fabrication of 5,330 box cars.



ASSEMBLY line methods are used.

EQUIPMENT for shop came wholly from U.S. suppliers.

QUICK LOADING and unloading, with fork lift trucks handling palletized loads, is one of the Unit Load car's assets. Overhead garage-type doors provide easy access to all compartments simultaneously.



DAMAGE REDUCTION was dramatic in initial tests of the car. Permanent bulkheads divide the car into five compartments, and no single unit of lading can shift more than a few inches.

Shippers Like the Unit Load Car

Year's test confirms builder's claim of damage-free lading performance and sharply lower loading and unloading costs

The unit load freight car, introduced a year ago as a new weapon against damage and high loading-unloading costs, is living up to its advance billing. The revolutionary car, with its five fixed compartments and 10 overhead garage-type doors, has rolled up 12 months in test service with a half dozen major shippers. Here's what they're saying about it:

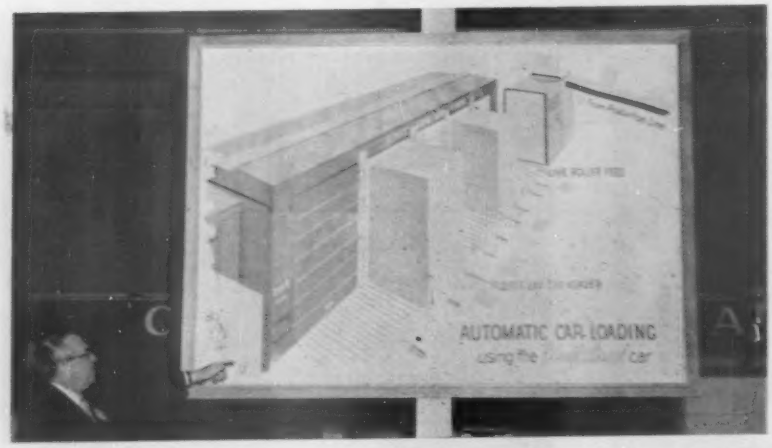
"We have accomplished a complete operation (loading or unloading) in 20 minutes."—A. C. Schier, traffic vice-president, *General Foods*.

"There was no breakage whatsoever in our entire shipment."—Hugo Waninger, vice-president, *Anheuser-Busch*.

"It's the perfect answer to distribution."—R. C. Waehner, general manager, distribution division, *Lever Brothers*.

This unit load car, first conceived by Mr. Waehner, was built in the summer of 1955 by the International Steel Company. The car was unveiled to shippers and carriers at a "cost reduction clinic" in Chicago on October 11, 1955. Owned by the newly formed Unit Load Car Corporation, the car was offered to shippers for testing (Railway Age, Oct. 3, 1955, p. 40).

Results of these subsequent tests were accumulated and are just now being made public. Based on reports from its users, the car promises to find a place for itself in the handling of many kinds of traffic, especially canned and bottled goods, packaged grocery products, small and mixed appliances and the like. Most shipments require no dunnage or banding.



AUTOMATIC CAR LOADER is envisioned for use with the car. A gravity conveyor tied directly into production line would move packages to an automatic stacker which would assemble loading units into predetermined size. Then, via live roller feed, stacks would move in front of car and be pushed inside by automatic pusher bar.

Test Results

The owning company has already made plans to acquire up to 3,000 of the cars, and initial deliveries are slated to begin early next year. The finished cars will be available for lease or sale.

Shippers who tested the car during the past 12 months included Lever Brothers, Anheuser-Busch, Hotpoint, Armour & Co., General Foods and Schlitz Brewing Company.

John G. Borson, general traffic manager of Hotpoint, reported that when his firm loads smaller appliances and mixed shipments into standard box cars it involves "an expenditure of $14.25 per car for bracing and 16 man-hours of labor."

With the compartmentized unit load car, he said, bracing is completely eliminated and labor costs cut to less than 8 hours. He added that proper training of employees probably will produce further time savings.

"On the initial test, which involved handling through the Chicago switching district, the load arrived at destination with no damage of any kind," he revealed.

A similar story was told by Mr. Waninger of Anheuser-Busch.

Shipping 1,584 cases of returnable bottle beer, on pallets, Anheuser-Busch was able to load the car in 25 minutes. End compartments were loaded two pallets high and the inner compartments, one pallet high.

Mr. Waninger, in reporting "no breakage whatsoever," said there were a few marred cartons as a result of the load shifting against the compartment doors; but, in his opinion, "this type equipment has excellent appointments to eliminate normal damage to our product."

Mr. Waehner of Lever Brothers pointed out that unloading of the car took 23 minutes with a single fork-lift truck operator and no assistant. A load of vegetable oil shortening was handled with no damage, as compared to the "extensive repacking" of cases formerly required on the same movement.

General Foods tested the car on a half dozen shipments, several up to 1,000 miles. Mr. Schier reported the cars were loaded with 8 palletized units in each compartment (double tiered) and some loads were in excess of 60,000 lb. Damage was negligible.

Modifications Studied

"In my opinion," Mr. Schier said, "this type car, when available for general use, will materially reduce carloading-unloading expense and eliminate transit damage completely —a real contribution to our industry."

On the basis of tests so far, some minor changes have been made in the car. Steel plate flooring has been installed in the compartments, and the width of two inner compartments reduced by five inches each to control load shift more precisely.

The latter move has been a success, apparently. Mr. Schier noted that in shipments made after this change damage was "completely eliminated" in these two compartments. The width reduction was accomplished by simply installing new bulkheads.

Shippers who have used the car have suggested a few changes to fit their peculiar needs. Mr. Waninger, for example, said he would like to see the car outfitted for handling draft beer, which would call for mechanical refrigeration. Frank Cheshire, president of the Unit Load company, has said that installation of such refrigeration in some future cars already is planned.

Mr. Waninger also said his firm, if it uses this type car on a large scale, would use 33-in. by 38-in. pallets. This would call for further modification of compartment widths, but, as the car's originators have said, one virtue of the car is the versatility with which the interior can be changed to meet a shipper's specific requirements.

(Continued from page 16)
traffic manager, Portland, named freight traffic manager there.

George H. Hill will resign, effective December 1, as assistant to president—public relations of the MeC, but will continue with the Boston & Maine.

MISSOURI-KANSAS-TEXAS.—**J. F. Coghlan, Jr.**, division sales manager, Wichita Falls, Tex., appointed division freight sales manager, Dallas, to succeed **Norman Mansfield**, named special sales agent, Dallas. **W. D. Dennis**, assistant division freight sales manager, Dallas, replaces Mr. Coghlan.

Ralph O. Johnson, superintendent of communications, named to new position of superintendent of communications and signaling, with headquarters as before at Denison, Tex. **Roy R. Wood**, signal engineer, Denison, retired November 1.

MISSOURI PACIFIC.—**M. R. Fair**, trainmaster, Osawatomie, Kan., transferred to Little Rock, Ark., to succeed **E. W. Stanley**, retired. Mr. Fair's successor is **K. M. Converse**, transferred from Jefferson City, Mo., who in turn is replaced by **T. W. Faulk**, trainmaster, Aurora, Mo. **J. L. Ragland**, assistant trainmaster, Gurdon, Ark., succeeds Mr. Faulk. **J. W. Cornett, Jr.**, assistant trainmaster, Memphis, Tenn., promoted to trainmaster, St. Louis Terminal division (east side of river), Dupo, Ill.

NACOZARI.—**B. R. Martinez** appointed general auditor, Douglas, Ariz., succeeding **A. Diez**.

NEW HAVEN.—**Winthrop E. Pierce**, division freight agent, Providence, R. I., appointed general freight agent, New York. **Ward R. McNamara**, commercial agent, Boston, succeeds Mr. Pierce as division freight agent at Providence.

NEW YORK CENTRAL.—**Ashley L. Wright**, general mechanical superintendent of locomotives, system, retired October 31. **R. E. Nurse** appointed assistant industrial engineer, New York.

L. M. Riley, superintendent, Springfield, Ohio, appointed superintendent of transportation, Cleveland, succeeding **James J. Wright**, named director of technical research, Collingwood, Ohio, (Railway Age, Oct. 29, p. 35).

Robert J. Mullins appointed New England freight sales manager, Boston, Mass., succeeding **Richard M. Cornell**, named division freight sales manager, Charleston, W. Va., to replace **Joseph V. Loffon**, retired.

Harry W. Moore, Jr., appointed to newly created position of coal sales manager, engineering and development, New York. **Norman D. Maurer** named assistant coal sales manager, Cleveland, succeeding **Roy Schwartzenberg**, retired.

NEW YORK, ONTARIO & WESTERN.—**H.V.D. Houston**, personnel manager, Middletown, N.Y., retired October 31.

NICKEL PLATE.—**Charles H. Gorn**, assistant general passenger agent, Cleveland, appointed general passenger agent there, succeeding **Tom E. LaSueur**, retired.

Robert P. Murray appointed general agent, Grand Rapids, Mich., succeeding **Charles H. Smith**, retired.

NORFOLK & WESTERN.—**C. E. Woodson** named assistant purchasing agent, Roanoke, Va., effective December 1, succeeding **R. G. Bishop**, whose promotion to purchasing agent was noted in Railway Age, Oct. 29, p. 35. Mr. Woodson is now on furlough from the road serving as executive vice-chairman, Purchases & Stores Division, Association of American Railroads, Washington, D. C.

J. A. Gearhart, general foreman, locomotive department, appointed superintendent shops, Roanoke, succeeding **Bernard Cook**, retired. **H. L. Scott, Jr.**, assistant master mechanic, Norfolk division, promoted to master mechanic of that division at Crewe, Va., succeeding **Walter Bodwell**, retired.

W. G. Holyfield, chief clerk and inspector, dining car department, appointed superintendent dining cars, Roanoke, succeeding **James W. Hamaffee**, retired.

PENNSYLVANIA.—**Samuel R. Hursh**, chief engineer, Philadelphia, appointed an assistant vice-president and will assist the president in special engineering studies to prepare the road for the types and volume of business expected five and ten years

Samuel R. Hursh

Chester J. Henry

hence. **Chester J. Henry**, assistant chief engineer — construction, succeeds Mr. Hursh as chief engineer. **John F. Piper**, superintendent of transportation, Philadelphia region, replaces Mr. Henry as assistant chief engineer—construction. **William G. Dorwart**, superintendent of transportation, Pittsburgh region, transferred to the Philadelphia region. **Howard C. Kohout**, manager, TrucTrain Service, Philadelphia, named superintendent of transportation, Pittsburgh region, and **Albert M. Scofield**, district engineer at Pittsburgh, named superintendent, TrucTrain Service at Philadelphia.

Marion Streett, assistant superintendent of transportation, Lake region, Youngstown, Ohio, appointed superintendent of transportation, Buckeye region, Cincinnati, succeeding **K. J. Silvey**, named to the newly created position of assistant area engineer, Chicago. In his new post Mr. Silvey will work in the Northwestern, Southwestern, and Buckeye regions. **Robert E. Sullivan**, trainmaster, Northwestern region, Chicago, promoted to assistant superintendent of transportation at Youngstown, succeeding Mr. Streett.

Warren G. Smith, district sales manager, Seattle, Wash., promoted to the newly created post of assistant sales manager, Pacific States, at that point.

Vincent J. Floyd, acting manager, industrial development, appointed manager, industrial development, Southwestern region, Indianapolis, Ind. **John W. Warbritton** named industrial representative on Mr. Floyd's staff, succeeding **V. Henry Louthan**, transferred to Philadelphia.

John E. Lohew, manager, livestock sales and services, Richmond, Ind., promoted to supervisor livestock and packing house products, Chicago, to succeed **Norman M. Kirk**, retired.

PITTSBURGH & WEST VIRGINIA.—Edward J. Siemon, Jr., assistant to vice-president—rates and divisions, Pittsburgh, promoted to freight traffic manager—rates and divisions. **J. W. Poland** promoted to assistant general freight agent, Philadelphia.

Marion Streett

K. J. Silvey

RAILWAY EXPRESS AGENCY.—William J. Roche, chief clerk to vice-president—traffic, appointed traffic manager, Southern region, Atlanta, Ga.

READING.—Robert D. Crompton named a public relations representative. Mr. Crompton was formerly manager of publicity, Chamber of Commerce of Greater Philadelphia.

Boober Gross, manager of industrial development, named real estate agent, Philadelphia, succeeding the late **John Wagner. Francis X. McBrearty**, industrial agent, succeeds Mr. Gross and has been replaced by **William R. Yocum**, industrial representative.

ROCK ISLAND.—J. O. Howard, assistant advertising manager, named to the newly created position of manager, advertising-public relations, assuming the duties of **Walter W. Rodie**, advertising manager, retired. In addition, Mr. Howard will handle certain public relations assignments. **T. J. Zirbes, Jr.**, special representative, public relations department, and editor of the company's employee magazine, The Rocket, appointed manager, press relations. **Esther M. Glasper**, public relations representative and associate editor of The Rocket, has assumed the duties of editor, combined with her public relations assignments.

C. P. Bradley, general passenger agent, Kansas City, transferred to Chicago.

SANTA FE.—John C. Starkey, district freight agent, Santa Ana, Calif., appointed to newly created position of general industrial agent, Chicago.

SEABOARD.—H. E. Whitaker appointed general agent, Tulsa, Okla., succeeding the late **J. D. Prewett.**

SOUTHERN.—Leason L. Waters, superintendent, Washington division, Alexandria, Va., appointed general superintendent transportation, Eastern lines, Charlotte, N. C. **Winfred L. Thornton**, trainmaster, Danville, Ky., named superintendent, Selma, Ala., succeeding **Thomas D. Moore, Jr.**, who replaces Mr. Waters at Alexandria.

Robert E. Smith, assistant general freight agent, **Greenville, S. C.**, appointed assistant freight traffic manager, Charlotte, succeeding **George C. Potter**, retired. **Walter M. Crehore**, division freight agent, Greenville, promoted to succeed Mr. Smith as assistant general freight agent. **Jack P. Cunningham**, commercial agent, Greenville, succeeds Mr. Crebore as division freight agent.

William Jardine, general western freight agent, Chicago, appointed executive general agent, Louisville, Ky., succeeding **J. A. Cooper**, retired. **James W. Lee**, assistant freight traffic manager, Atlanta, Ga., promoted to succeed Mr. Jardine as general western freight agent. **Harris L. Bondurant**, general agent, Philadelphia, Pa., promoted to assistant freight traffic manager, Greensboro, succeeding **Howard Cook**, who replaces Mr. Lee at Atlanta. **Denver L. Lacey**, assistant general freight agent, New Orleans, La., named general agent, Baltimore, succeeding **Joseph J. Hubbard**, transferred to Philadelphia. **George H. Corcoran**, commercial agent, New Orleans, appointed district freight agent there, succeeding **J. Frank Young**, promoted to assistant general freight agent at that point.

R. G. Kilpatrick appointed auditor for internal audit, Washington, D.C. **Robert L. Twynham**, analyst electronic processing, Washington, appointed assistant auditor there, succeeding **Andrew J. Morris**, retired.

William J. Roche

Thomas H. Maguire

SOUTHERN PACIFIC.—Edward L. DeMattei, assistant to treasurer, appointed to the newly created position of assistant treasurer, Pacific lines.

Ralph D. Sheary appointed assistant signal engineer, San Francisco.

WESTERN TRAFFIC ASSOCIATION.—Thomas H. Maguire, general solicitor of the Milwaukee, appointed chairman and counsel, executive committee, WTA, succeeding **Harry C. Barron**, who retired October 31.

OBITUARY

O. A. Garber, 82, retired chief mechanical officer of the **Missouri Pacific**, died October 29 at Clayton, Mo.

Julius G. Luhrsen, 79, former labor member of the **Railroad Retirement Board** and former president of the American Train Dispatchers' Association, died October 16 at Chicago.

Organizations

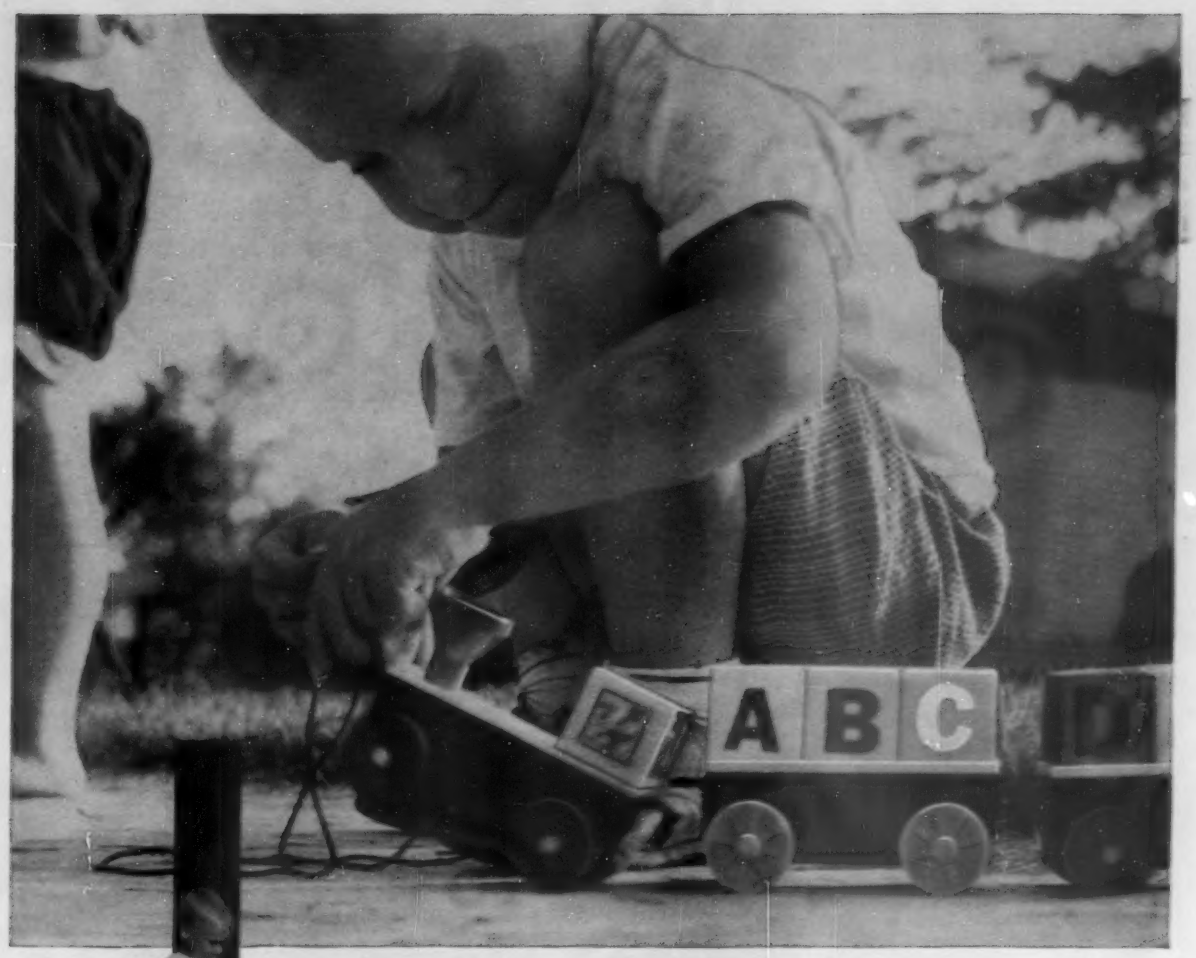
Allied Railway Supply Association.—R. E. Coughlan, retired chief metallurgist and engineer of tests of the Chicago & North Western, has been appointed secretary-treasurer, succeeding C. F. Weil.

American Association of Railroad Ticket Agents.—New officers are: President, John D. Florence, manager travel center, La Salle Street Station, Chicago; vice-president, George D. Douglas, ticket agent, Englewood Union Station, Chicago.

American Institute of Consulting Engineers.—Ralph Budd, retired chairman of the Chicago Transit Authority and former president of the Great Northern and the Burlington, will receive the institute's award of merit for 1956 at the group's November 27 annual dinner in New York. Principal speaker at the dinner will be Harlow H. Curtice, president of General Motors Corporation. Mr. Budd will be introduced by Alfred E. Perlman, New York Central president.

American Wood Preservers' Association.—New officers are: President, Noel E. Kittell, chemist and

(Continued on page 43)



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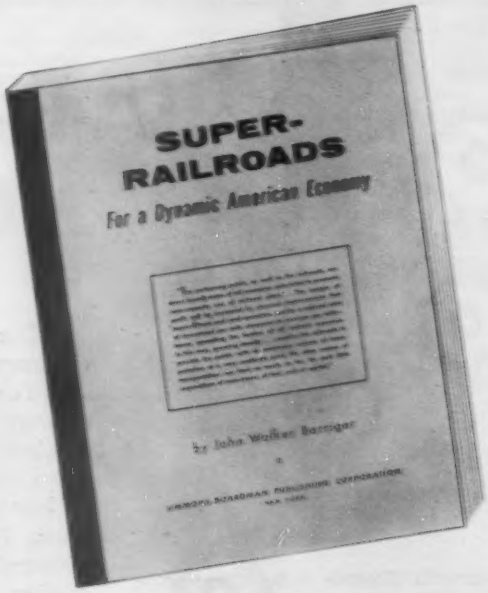

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We want "Super-Railroads for a Dynamic American Economy". Please send as indicated below:

_____ copies at _____ total cost.

200 or more copies: $1.00 each (fob)
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My check is enclosed _____ Please bill me _____

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COMPANY:_____

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CITY:_____ ZONE:_____ STATE:_____

11-12-56

Last word *in Passenger Comfort!*

No problem for Honeywell Electronics—even though Talgo cars are 109 feet long. With the exclusive averaging feature of the Honeywell Electronic system, two thermostats are used—one at each end of the car. Their signals are averaged and the resultant signal controls both the heating and cooling system for even comfort throughout the car.

New Haven's new Talgo train features Honeywell Electronic Heating Controls

DESIGNED for high speeds and economical performance, this New Haven Talgo train also offers passengers the last word in modern comfort.

Rugged Honeywell Electronic controls keep a precise watch over car temperatures by controlling the train's electric heat and mechanical cooling. A unique Honeywell outdoor thermostat adjusts the hot water floor heat to changing outdoor temperatures—eliminating completely the problems of heat "pile up" and "cold wall chill."

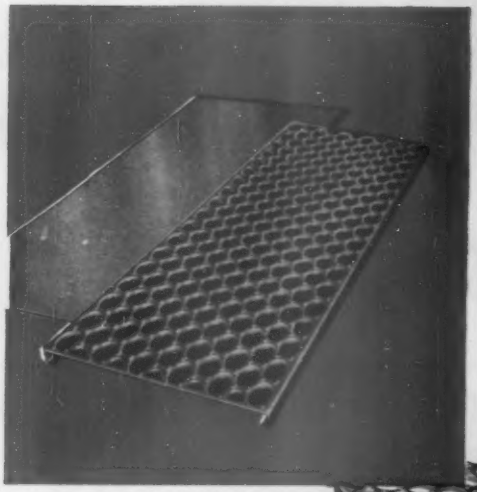
The Honeywell system can be easily and economically installed in new trains like the Talgo or in standard cars. You can obtain complete and detailed information on the modern Honeywell Electronic car heating system. Just simply write to Honeywell Dept. RA-11-282, Minneapolis 8, Minn.

MINNEAPOLIS **Honeywell**

112 offices across the nation First in Controls

the Morton OPEN-GRIP

RUNNING BOARD AND BRAKE STEP



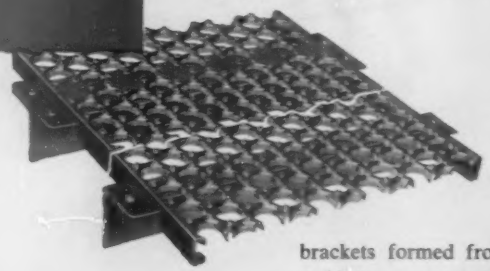
EXCLUSIVE ONE-PIECE CONSTRUCTION

Designed for ease of application, minimum maintenance and permanent sure footing.

"NO COST" MAINTENANCE — *One* piece of heavy gauge non-corrosive steel makes *one* piece of Open-Grip running board . . . no welds, joints or rivets . . . it *can't* break up. *GUARANTEED to last the lifetime of the car body!*

PERMANENT SAFETY — the perforated, raised Kass safety buttons with the self-cleaning "Open-Grip" design *always* provide a *positive* foothold under *any* weather conditions.

The unique design of the *adjustable* "cup-and-bolt" anchor eliminates precision work and greatly reduces application costs. A comparison of application costs between Morton Open-Grip and other running boards will tell the difference.



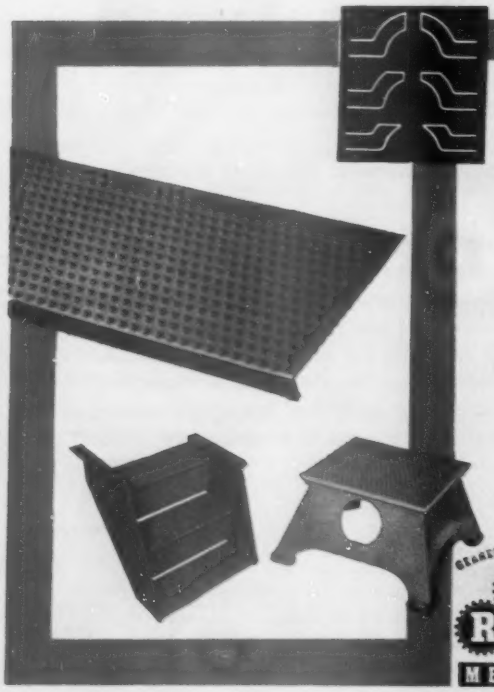
Self-cleaning—safe all year around. Hot dip galvanized after fabrication.

Strong—will withstand high distortional strain.

Versatile—used as: locomotive footboards, caboose platforms, step treads, catwalks, etc.

NEW RIVETED APPLICATION DESIGN

One piece construction continued! Application brackets formed from the board itself — no welds to come apart, or extra pieces for added weight.



KASS SAFETY TREADS

SELF SHARPENING BUTTONS. Stay safe as they wear - *lasting* anti-slip protection!

Famous Kass Safety Tread gives sure footing — positive foot-hold from all angles.

Versatility— fabricated of mild steel, stainless, aluminum or other alloys. Available in any size up to 36" x 120" and in thickness of 10, 12, 14 and 16 gauge. Flange arrangements as specified.

Economy–Morton Kass Treads are lower in cost, lighter in weight and wear longer. Simple installation — no maintenance problems.

GEARED TO PROGRESS P R I MEMBER

Morton MANUFACTURING COMPANY

5125 West Lake Street, Chicago 44, Illinois

(Continued from page 38)

wood preservation engineer, Joslyn Manufacturing & Supply Co.; first vice-president, W. W. Barger, chief inspector, treating plants department, Santa Fe; second vice-president, P. B. Mayfield, technical consultant, Barrett Division, Allied Chemical & Dye Corp.; and treasurer, W. A. Penrose, secretary of the AWPA. New members of the executive committee are: A. M. Deiters, manager, East Point plant, Southern Wood Preserving Company; and L. J. Jacobi, supervising engineer, inspection and standards, Detroit Edison Company.

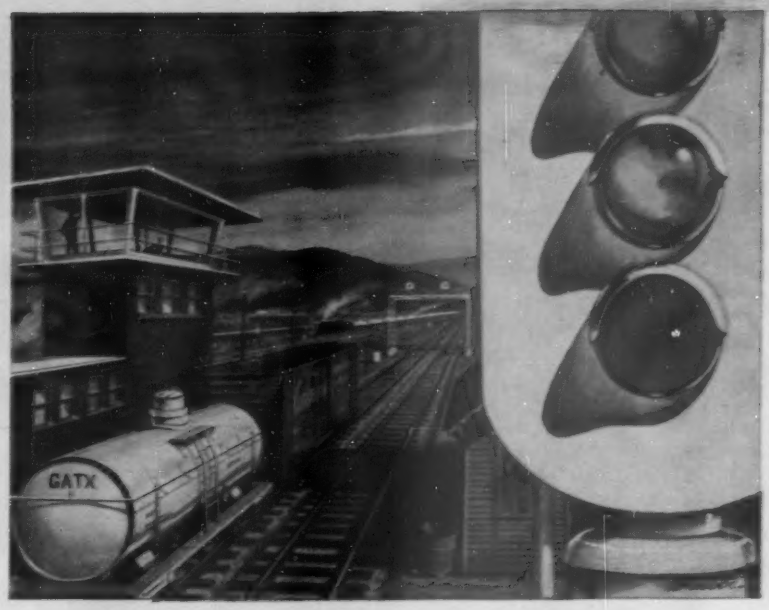
Metropolitan Traffic Association of New York.—Joseph A. Dowling, general agent, Central of Georgia, has been elected president; Walter Dempsey, American Key Products Company, and George Braun, Wilson Freight Forwarding Company, vice-presidents; Gerald Parker, New York, Ontario & Western, secretary; Arthur Allen, Lackawanna, financial secretary; and Fred Wenk, Associated Transport, treasurer.

Railroad Community Committee of Columbus.—O. K. Lawson, division superintendent, Chesapeake & Ohio, has been elected chairman; J. A. Bonelli, assistant superintendent transportation, Pennsylvania, vice-chairman, and A. B. Griffin, freight representative, Baltimore & Ohio, secretary.

Railroad Enthusiasts, Inc., New York Division.—This group has announced plans for a three-week tour of European railroads, at an all-inclusive price of about $600, in September 1957. The trip will cover England, Holland, Germany, Switzerland, Austria and Italy. The organization in 1955 operated a similar three-week tour covering British Railways. A chartered airplane will be used from the United States. Arthur T. Knowles, Box 1943, Grand Central Post Office, New York 17, N. Y., is in charge.

Railway Tie Association.—At the annual convention of the association, held in the Hotel Roanoke, Roanoke, Va., October 25-27, the following new officers were elected: President—Frank W. Campbell, Jr., president, W. B. Crane Company, Chicago; first vice-president—Edward F. Schlafly, secretary-treasurer, Potosi Tie & Timber Co., St. Louis; second vice-president—W. L. Winham, T. J. Moss Tie Company, St. Louis. Members elected to the executive committee are: D. B. Frampton, Jr., D. B. Frampton & Co., Columbus, Ohio; M. L. Wilson, Kirby Lumber Corporation, Silsbee, Tex.; Henry Webster, Webster Lumber Company, Minneapolis; R. G. Juengel, Gross & Janes Co., St. Louis; and Douglas Grymes, Jr., Koppers Co., Inc., Pittsburgh, Pa. Roy M. Edmonds was re-elected secretary-treasurer by the executive committee.

Traffic Club of Greater Miami.—James O. McCall, assistant vice-



Aluminum Paint Protects

against rust, smoke and fume corrosion

Here is a way to cut costly railroad maintenance and equipment replacement. Here's how you can keep equipment in top operating condition.

Good aluminum paint actually puts a *protective shield* on rustable metal and masonry surfaces. It guards against rust, smoke and fume corrosion...and beautifies as it protects. It reflects up to 85% of the sun's heat to minimize expansion problems.

Use aluminum paint on your signaling and communication equipment, bridges, towers, freight and passenger cars, buildings and other structures and equipment. Usually a single coat is all that's required. And the time between paintings is longer because *one* coat lasts and lasts. You reduce maintenance costs, get extra protection.

Reynolds does not make aluminum paint. If you would like the names of manufacturers who rely on the high quality of genuine Reynolds Aluminum Pigments, we'll gladly send you the list. Just use the coupon below.

Strontium Chromate-Aluminum Pigment* for Rust Inhibitive Coatings

Wherever unusual conditions require *extra* protection against rust and corrosion, use a *fortified* aluminum pigment. Reynolds Aluminum — Strontium Chromate pigment* does the best job. A single coat inhibits rust while still giving you the hiding power, reflectivity, and durability of full leafing aluminum pigment. Write for complete information. *U.S. Patent 2701772

See "CIRCUS BOY", Reynolds new dramatic series, Sundays, NBC-TV.

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P. O. Box 1800-PO, Louisville 1, Kentucky
Please send me information about:
☐ Aluminum Paints.
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☐ Also send me list of manufacturers.

Name_____
Company_____
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City_____ Zone____ State_____

The Finest Paints Made with Aluminum are made with REYNOLDS ALUMINUM PIGMENT

By the makers of Reynolds Wrap

LELIE
FEBRUARY 20, 1885
NEW TELEGRAPH EMPLOYS ELECTRICAL NUISANCE
NEW YORK, Feb. 20, 1885 — The phenomenon called *induction*, which has been, and indeed is now, a great annoyance in the working of telegraph and telephone lines, is being put to practical use by an imaginative device called the Phelps Induction Telegraph. An instance will, perhaps, better illustrate the nature of this phenomenon.
A gentleman attempting to use his private telephone one morning was astonished to hear the word "Hello, Chicago", and a long subsequent conversation carried on between Chicago and Jersey City. This was possible, not because his instrument was in any way connected with the primary circuit, but simply through an induced current which was set up in another telephone wire which chanced to be about 7 ft. away.
Thus, the Phelps device,

From the above "imaginative device" to the modern miracle of closed-circuit television, American railroads are quick to adopt proven innovations for more efficient operation. And from its infancy, Graybar has always kept its stock and services in tune with the newest developments in railroad communications. Wire and cables . . . carrier telephone and telegraph equipment . . . closed-circuit television, . . . sound systems of all types, each of the thousands of items needed by modern railroads can be supplied through more than 130 conveniently located Graybar offices and warehouses. And you can rely on the same experienced Graybar service in the fields of lighting, ventilation, power apparatus, control equipment and tools. Check your Railroad Pocket list for the address of your nearby Graybar representative. Call him whenever you need assistance.

100,000 electrical items are distributed throughout the nation... via GraybaR

616-2011

GRAYBAR ELECTRIC COMPANY, 420 LEXINGTON AVENUE, NEW YORK 17, N. Y.
OFFICES AND WAREHOUSES IN OVER 130 PRINCIPAL CITIES

president, National Carloading Corporation, has been elected president, and Claude H. Ryan, division freight agent, Louisville & Nashville, vice-president.

Supply Trade

David R. Kendell, manufacturing manager, rebuild of **Electro-Motive Division** of **General Motors Corporation,** has been appointed superintendent of manufacturing operations in the new building under construction at the La Grange, Ill. plant. **John L. Wagner,** branch plant superintendent, Halethorpe, Md., succeeds Mr. Kendell. The following sales department promotions announced: **G. F. Greenip,** from district sales representative, to regional sales engineer, St. Louis; **R. E. Hill,** from sales engineer, La Grange, Ill., to district sales representative, St. Louis; **A. E. Roberts,** district engineer, San Bernardino, Cal., to district sales representative, Chicago; and **Paul C. Ganzer,** district engineer, to district sales representative, Chicago.

John C. Virden, director and member of the executive committee of **Eaton Manufacturing Company,** has been elected president, effective January 1, 1957. **Howard J. McGinn,** who has held the dual positions of president and board chairman, will continue in the latter position. Mr. Virden, chairman of the **John C. Virden Company,** Cleveland, chairman of the Federal Reserve Bank of Cleveland and Federal Reserve agent for the Fourth Federal Reserve District, will relinquish these posts and devote full time to his duties as president of Eaton.

William B. Thornton has joined **Chromium Corporation of America** as sales engineer. He was formerly manager of field service and inspection for the locomotive division of **Baldwin-Lima-Hamilton Corporation.**

A. T. Cox, Jr., of **Cox-McGeorge Company,** Cleveland, has been appointed by **Wilson Engineering Company** as exclusive representative for railroads.

Joseph W. Petrie, who has headed the carrier and radio sales division of **Automatic Electric Company,** has been appointed to the newly created post of chief transmission engineer. In addition to coordinating transmission work and developing standards for the laboratory, he will assist railroads and other industries with transmission problems. He has been succeeded by **Jack B. Arnold. Tate B. Collins, Jr.,** has been appointed assistant manager of the division in addition to his present duties as eastern district

manager. **Bliss K. McCann** has succeeded Mr. Arnold as western district manager.

Albin D. Edelman has been appointed assistant chief engineer-railroad bearings, and **Ralph Altson** chief design engineer-railroad division, **Hyatt Bearings Division** of **General Motors Corporation.** Mr. Edelman, who succeeds **Richard J. Brittain,** on extended leave of absence, was formerly division engineer-railroad bearings, and Mr. Altson was drafting group supervisor.

Graybar Electric Company has been appointed distributor in the railway industry for the line of portable fire extinguishing equipment manufactured by **Walter Kidde & Co., Inc.**

Greenville Steel Car Company has announced the following appointments: **Verne O. Lowry,** executive vice-president; **George C. Brecht,** vice-president, sales; **Francis E. Stuver,** vice-president and treasurer; and **John T. Egbert, Jr.,** assistant to vice-president, sales.

Robert G. Patterson, vice-president and general sales manager, **Lamson & Sessions Co.,** has been appointed assistant to president, and has been succeeded by **James G. Rayburn.**

Sam Gurley, Jr., has been elected vice-president, sales, **H. K. Porter Company.** Until recently he held a similar position with **Reichhold Chemicals, Inc.**

O. B. Capps, who has been general mechanical inspector, Baltimore & Ohio, will join **Edgewater Steel Company** December 1, as service engineer for railroad products, succeeding **R. C. Carrick,** who will be transferred to the field selling organization.

W. M. Gibbs Railway Supply Company, Chicago, has been appointed sales agent for **Hobart welders** and allied products, serving railroads in Chicago and the Twin Cities areas, replacing **C. F. Weil,** retired.

AMP Incorporated has been announced as the new name of **Aircraft-Marine Products,** Harrisburg, Pa.

OBITUARY

Herbert L. Bone, 62, assistant to director of research and engineering, Union Switch & Signal - Division of Westinghouse Air Brake Company, died October 24.

Sidney G. Down, 80, retired first vice-president and director of Westinghouse Air Brake Company, died October 7 in San Diego, Cal.

Joseph D. Walsh, 64, works manager, Scullin Steel Company, died October 25, after 50 years of service with the company.

Sperry

REFLECTOSCOPE TEST BULLETIN

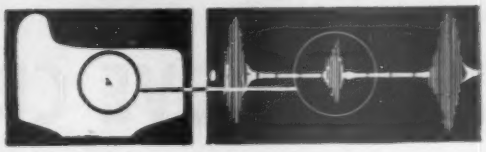
Sperry

ULTRASONIC WHEEL INSPECTION
Finds Flaws Before They Become Failures

Diesel, passenger and steel freight car wheels are being accurately, quickly and economically tested for internal defects with the Sperry Ultrasonic Reflectoscope. With today's faster trains and heavier loads, maintenance departments need, more than ever, such an efficient, reliable method of wheel inspection.

While ultrasonic testing at point of manufacture will assure that new wheels are free from defect at delivery, there are still millions of wheels in use – in every category of service life – that never have been tested. Periodic testing of all wheels is your assurance of fewer failures.

How Reflectoscope Works



A narrow beam of high-frequency sound penetrates the test piece or area and is reflected from any defect in its path – immediately and accurately picturing the defect on the Reflectoscope cathode ray tube. The Reflectoscope picture above shows a defect in a wheel rim. The cross section of the actual rim shows the defect – just where the Reflectoscope indicated it would be.

Locating internal flaws before they cause wheel failures is positive insurance against costly derailments . . . Reflectoscope inspection is the most accurate, economical method of locating wheel defects. Ask your Sperry Sales Engineer to show you how Reflectoscope works and how it can fit into your maintenance schedule. For more detailed information return the coupon below.

Sperry

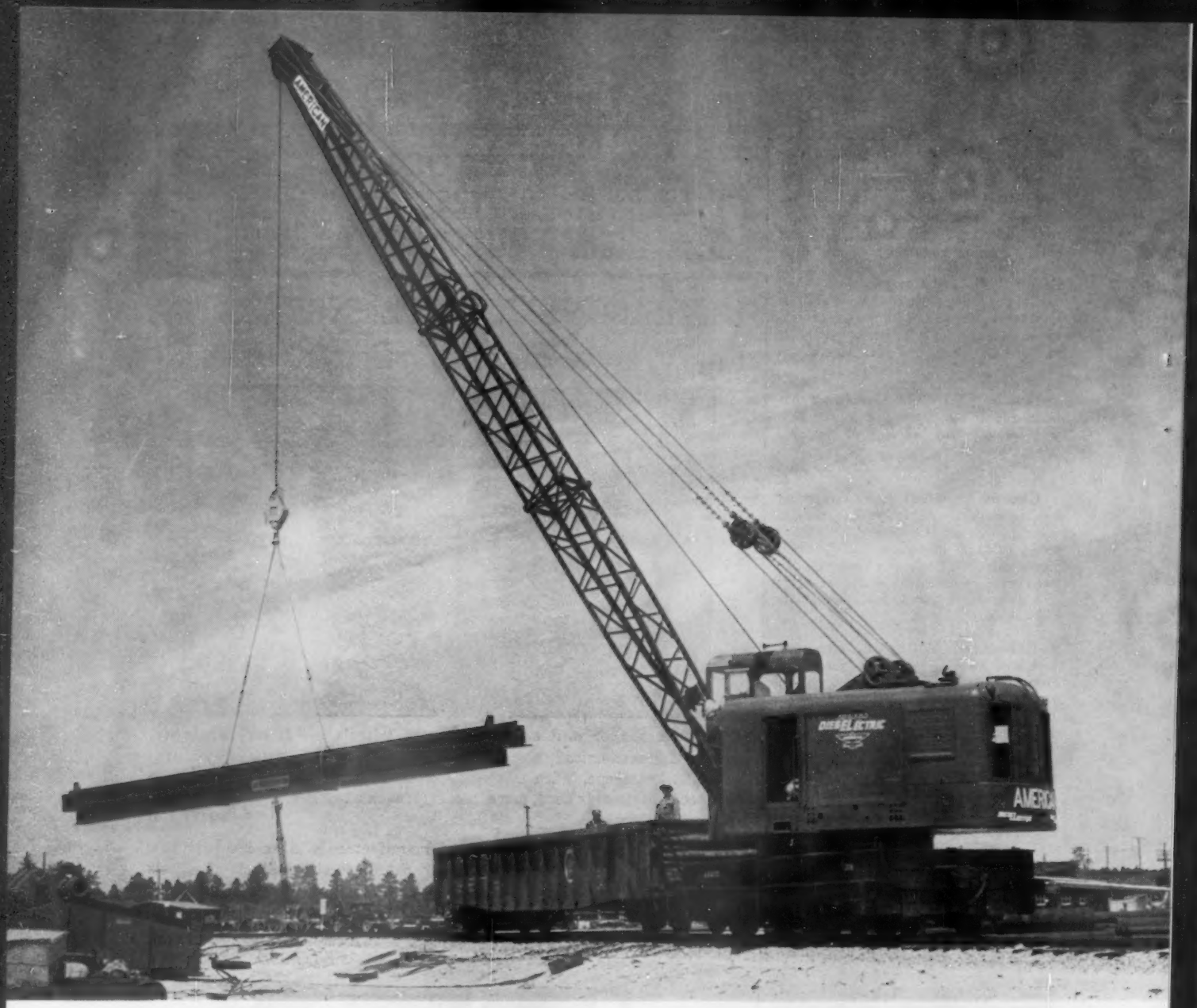
SPERRY RAIL SERVICE
Division of Sperry Products, Inc.
Danbury, Connecticut

Send details of ultrasonic inspection for railroad equipment.

Name_____ Title_____

Address_____

City_____ Zone_____ State_____



RECORDS PROVE CRANE EFFICIENCY

Cost-conscious railroads are discovering and profiting from the amazing efficiency and work-ability of American DiesELectric* Locomotive Cranes. Operating records prove that the big Americans do more work per day and do it at remarkably lower average cost! On-track assignments ranging from pile driving and steel handling through general maintenance-of-way jobs have demonstrated the DiesELectric's versatility! Its dependability on emergency jobs has been tested on landslides and washouts.

American DiesELectrics, like the 40-ton model above, are designed around the modern diesel-electric power-train; smooth electrically powered trucks—efficient diesel power for the crane. It's a patented American feature that eliminates more than 50 wearing parts—cuts maintenance costs as much as 50%! Another production boosting feature on all DiesELectrics are air controls that accurately spot loads of any size with only finger-tip pressure!

You can learn all the reasons why American DiesELectric Locomotive Cranes in 25 to 80-ton capacities are the leading choice of major rail lines by writing:

AMERICAN HOIST
and Derrick Company

St. Paul 1, Minnesota

*Registered Trademark. Diesel-electric Locomotive Crane U.S. Patent No. 2083460, Canadian Patent No. 368226 and Touch Control U.S. Patent No. 2370859 granted to American Hoist and Derrick Co.

CONFUSED by too many Journal Box "Gadgets"?

There's a lot of shouting and drum-beating these days about journal bearing lubrication. What with all the pads, packs, pouches, and parcels it's no wonder railroad maintenance men are getting confused!

Let's face it: These gadgets could make life pretty complicated. Though being used in only about 10% of the boxes now, all these contrivances present problems when your road finds them in cars in interchange . . . "jack" some, not others . . . "hook" some, not others . . . turn some over, leave others as is. Pretty rough on the hired help.

The fact is that the new, more uniform thread packing which our Institute developed in cooperation with the AAR is used in 90% or more of the nation's freight rolling stock for journal bearing lubrication.

Thread Packing is the most satisfactory and least expensive way known to provide efficient bearing lubrication — and recent developments make it even better! The old problem of waste grab (generally resulting from poor packing preparation or careless maintenance) can be prevented by the use of an inexpensive, approved journal stop or retainer. And the new all-weather oil adopted by the AAR helps eliminate seasonal problems.

Members of our Institute have labored long and hard to improve thread packing. The Institute of Thread Machiners' Seal on bales of new packing now guarantees quality which meets or exceeds AAR specifications. Our member companies will be glad to offer help and advice on your packing problems. Let us know if we can help you.

INSTITUTE OF JOURNAL BOX PACKING MANUFACTURED ACCORDING TO A.A.R. SPECIFICATIONS MEMBER THREAD MACHINERS

INSTITUTE OF THREAD MACHINERS, INC.

141 East 44th Street, New York 17, New York

Atlas Processing Corp., New York, N. Y.
Meyer Burstein & Sons, Neenah, Wisconsin
Dallas Waste Mills, Dallas, Texas
The J. Milton Hagy Waste Works, Philadelphia, Pa.
John J. McGrath, Inc., Philadelphia, Pa.
Miller Waste Mills, Inc., Winona, Minn.
National Waste Company, New York, N. Y.
O'Neill Brothers, Inc., Philadelphia, Pa.
The Pittsburgh Waste Co., Inc., Swissvale, Pa.
Riverside Mills, Augusta, Ga.
Royal Manufacturing Company, Perth Amboy, N. J.
Southland Manufacturing Co., Inc., Norfolk, Va.
Twin City Textile Mills Waste Co., St. Paul, Minn.

Some of the 160 Uses of CONCRETE on Railroads

NO. 34 OF A SERIES

The battery boxes, signal foundations, junction posts, cribbing and flat-base and bell-and-spigot pipe in this concrete-paved yard are a few of the growing number of precast concrete products being used to maintain transportation and communication services.

Precast concrete products are just a few of more than 160 uses of portland cement and concrete which enable railroads to improve service, provide greater safety, save time and money. The moderate first cost of such concrete improvements—plus their long life and low maintenance cost—result in ***low annual cost.*** This saves money for other budget items.

PORTLAND CEMENT ASSOCIATION
33 West Grand Avenue, Chicago 10, Illinois

A national organization to improve and extend the uses of portland cement and concrete . . . through scientific research and engineering field work

"Bell System private line telephone helps us control 1400 road power units from one point"

—Connie Haywood, motive power director of The Pennsylvania Railroad Company

The Pennsylvania's motive power is controlled from one point—by telephone. Bell System private line service permits the Philadelphia bureau to direct road power units efficiently through the vast system day and night.

"We've greatly improved the idle engine problem by centralizing control in Philadelphia," says Connie Haywood, director of The Pennsylvania's motive power control bureau. "And our new system is fast because practically all programming is done through private line telephones. Direct contact in this business is a definite requirement."

This Bell System service proved so successful on the programming of diesels that it was extended to steam and electric unit control. The Philadelphia bureau directs 1400 road power units to where they're needed 24 hours a day.

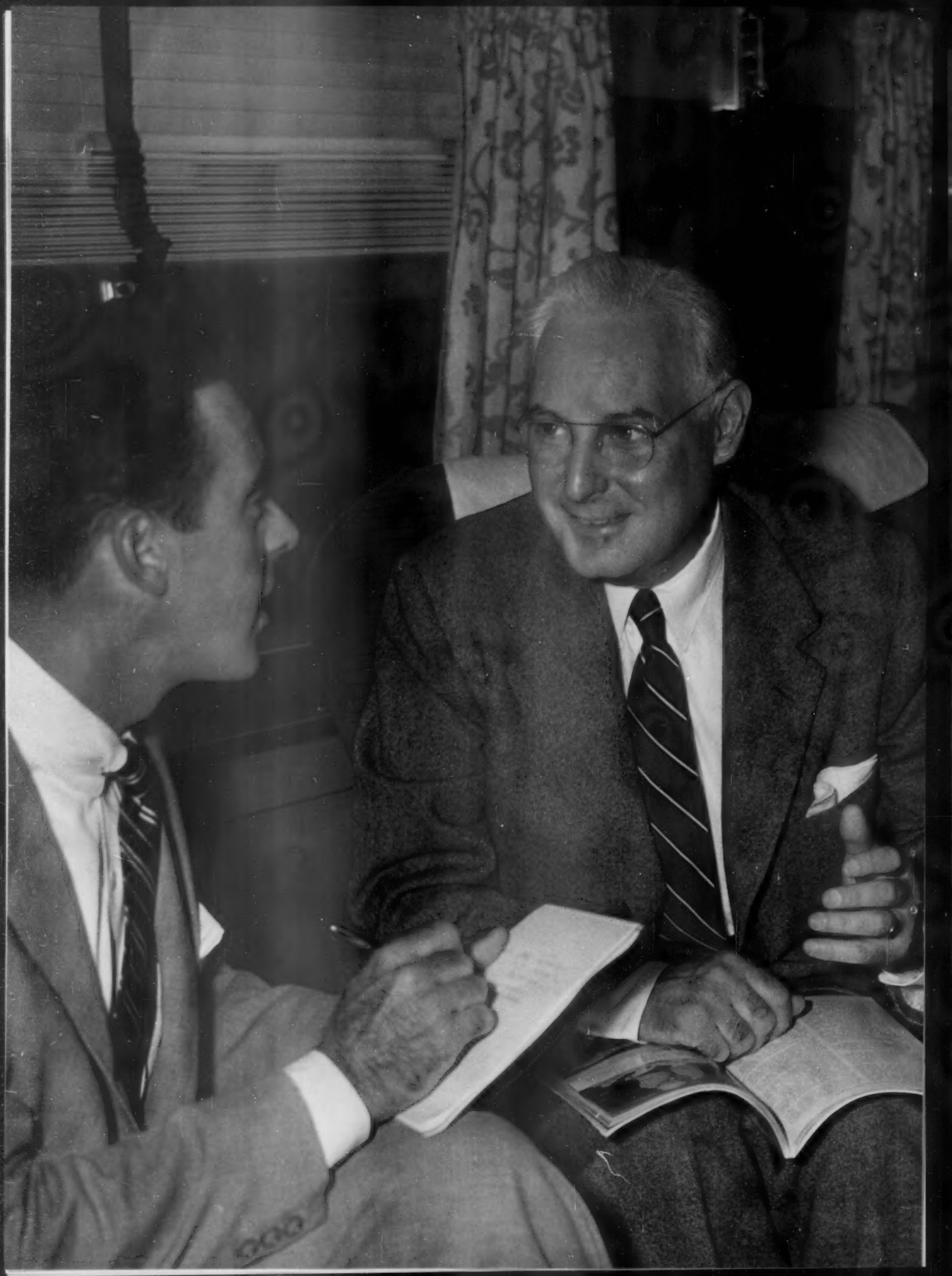
• • •

Bell System service can work for you as it does for The Pennsylvania. Call your Bell Telephone representative. He will be glad to arrange a study of your communication needs.

BELL TELEPHONE SYSTEM

Private Line Telephone • Private Line Teletypewriter

Channels for: Data Transmission • Telemetering • Remote Control • Telephotograph • Closed Circuit TV



Why he always takes the train

WE TOOK a little informal survey the other day among people we know who regularly travel by train.

"Why do you take the train?" we asked.

"It always goes," said one, "and on time!"

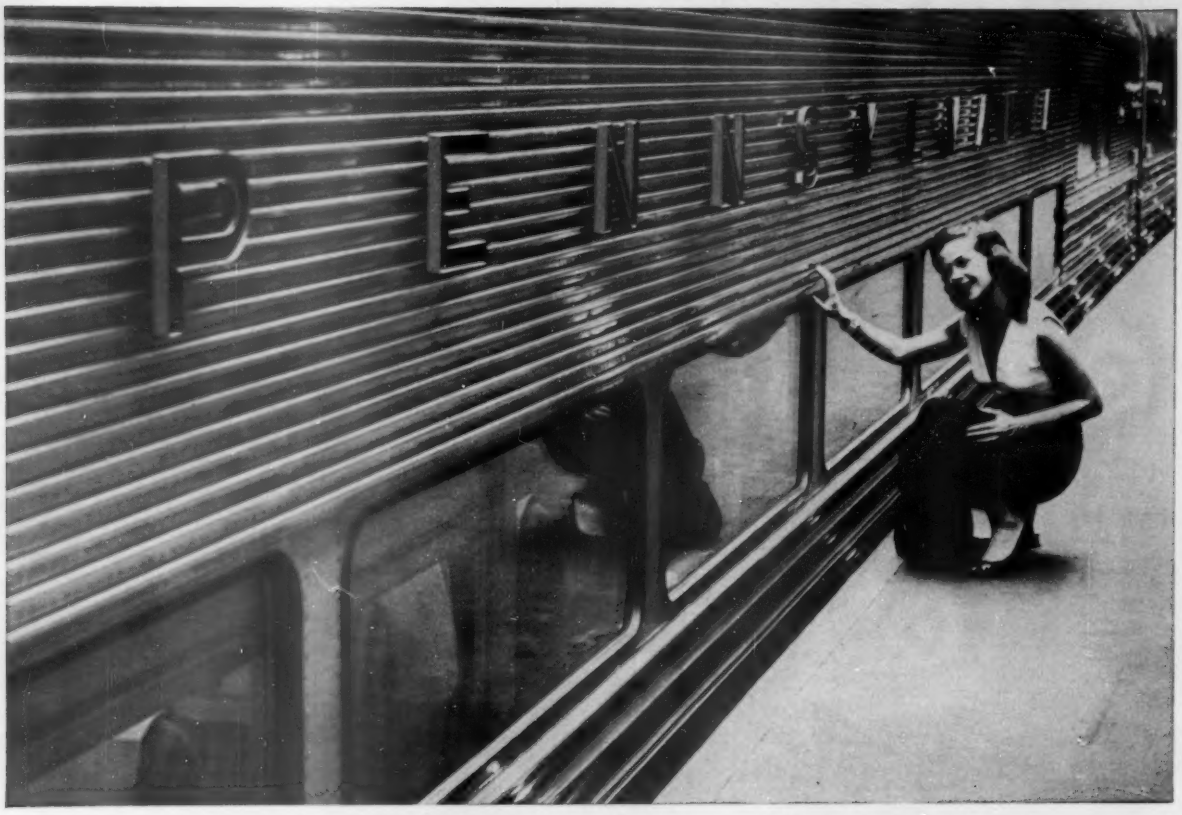
Another said, "It's safe, convenient—and comfortable."

And another, "I can read, or eat, or sleep, in greater comfort, while I travel by train. It actually *saves me time.*"

These replies were typical, and mighty interesting to us, because the comfort, convenience and dependability that rail travel provides are enhanced by uniform and reliable braking. And good brakes are our business.

Our objective is to assist you in maintaining high standards of train operation. Wherever we can be of assistance, our district representatives are subject to your call.

Westinghouse Air Brake
COMPANY
AIR BRAKE DIVISION WILMERDING, PENNA.



This sleek-lined, lightweight beauty hugs the rails. The "Keystone's" center of gravity is 45.1 inches instead of the standard 58. Weight saving, due to high strength nickel-containing stainless steel, tops 300,000 pounds for the seven-coach train.

Cars of the new P.R.R. "Keystone" are made of

Nickel-containing stainless steel ...weight saved, more than 30%

How can a car-builder – The Budd Co. in this case – install seats for eight additional passengers . . .
. . . hold car length to the A. A. R. standard 85 feet
. . . meet strength and safety requirements
. . . *and still cut down weight by 33,700 pounds per car?*

Credit the engineering skill that worked out the strong, basic tubular design.

Credit, too, the strong, corrosion-resisting metal used – nickel-containing Type 301 stainless steel.

Then consider two groups of facts about costs:

First cost savings – On the prototype train, these amount to $300 per seat. On full production basis it is estimated the per seat saving might reach $800. That's $459,000 for a train like the 7-coach Keystone.

Consider the weight savings – They are important. The total weight-reduction for the train tops 330,000 pounds. Even the trucks are lighter than standard.

Upkeep and operating savings – These figures for the Keystone are, of course, not yet in. But when they're recorded they ought to make good reading.

For on many progressive roads that use *standard* cars built of nickel-containing stainless steel, the upkeep cost records are more than favorable.

"Nickel Alloys in R.R. Equipment" is the title of an idea-generating booklet that every railroad man might well read with profit. If you haven't received a copy, let us know and we'll send you one.

INCO TRADE MARK **THE INTERNATIONAL NICKEL COMPANY, INC.** 67 Wall Street New York 5, N.Y.

Applying NO-OX-ID spray using boatswain's chair.

NO-OX-ID SPRAY METHOD SAVES MONEY ON BRIDGE PROTECTION FOR MANY MAJOR RAILROADS...

On-the-job spray equipment delivers NO-OX-ID direct from drum to sprayer. There is a NO-OX-ID consistency for every bridge spraying job.

Costly, time-consuming bridge painting programs are rapidly being replaced by the NO-OX-ID Spray Method. Procedure is simple. (1) Remove dirt and loose rust. (2) Spray steel surface with one coat of NO-OX-ID. Result: effective, economical, long-term protection.

REASONS FOR THE SWING TO NO-OX-ID

- Labor costs reduced...fewer bridge gangs needed
- Less scaffolding required
- Reduced steel preparation time
- One coat gives long-term protection

Dearborn has served railroads since 1887 with NO-OX-ID rust preventives, water treatment, cleaners and detergents.

FOR LONG TERM PROTECTION

Dearborn® NO-OX-ID

Dearborn Chemical Company
Merchandise Mart Plaza, Dept. RA,
Chicago 54, Ill.

Please send me full information on the NO-OX-ID Bridge Spraying Method.

Name.....*Title*.....

Railroad.....

Address.....

City.....*Zone*.....*State*.....

POSITIONED CURVED BASE BEARING

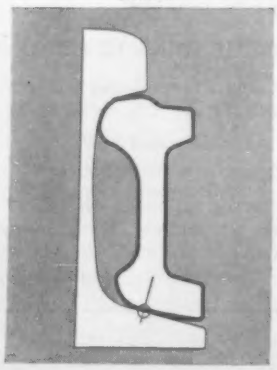
Rails and rail joints are not finished with the degree of accuracy to templet design as are machined products, consequently, variations within accepted mill tolerances can exist. Such variations will affect the fit of joint bars to the rails. When relatively full or shy joints are applied to rails, a line contact exists at one or more of the fishing surfaces (Fig. 1). Like conditions can exist if there are similar variations in the fishing height of the rail.

When the Headfree joint was first introduced, it had a flat bearing surface contacting the rail base (Fig. 3). The radial bearing in the upper web fillet eliminated a line bearing in this area, but the possibility of improper contact on the base still existed and was further aggravated by the development of the larger head-web fillet in the newer rails.

This undesirable condition has been eliminated by the development of the positioned curved base bearing (Fig. 4). This feature is obtained by rolling the bottom contact area of the joint bars slightly convexed, laterally. True, this curvature results in an initial limited bearing, but by careful positioning, the line of contact is placed in the least disadvantageous location, directly under the web of the joint bar. As wear develops, the area of contact increases and because of the curved surface, the heel of the joint bar is raised sufficiently, so that it will not bite into the rail base, impeding inward movement of the joint bars.

The positioned curved base is now in use in all of the Rail Joint Company's standard bars, both Headfree and head contact (Fig. 2), and the proclivity of the latter to cock, is virtually eliminated.

Curved Base with Positioned Contact



Intensity of Strain is Proportional to the Number of Lines.

Fig. 1—Head Contact—Flat Base

Fig. 2—Head Contact—Curved Base

Fig. 3—Headfree—Flat Base

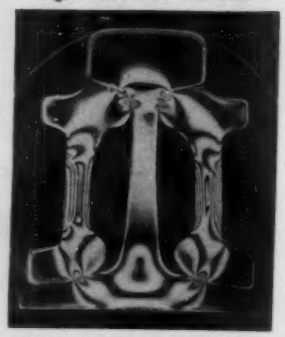


Fig. 4—Headfree—Curved Base

THE RAIL JOINT COMPANY Inc.
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Edgewater serves the modern

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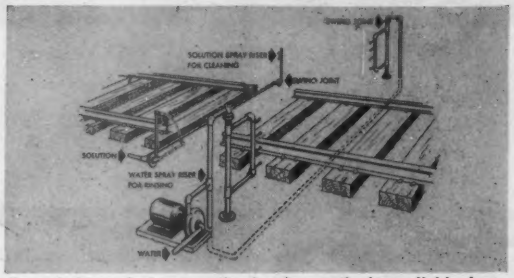
Original pressure-spray cleaning by Oakite cuts equipment-washing costs

Almost TEN years ago, Oakite FIRST pioneered the so-called pressure-spray system of cleaning and rinsing locomotive running gear and passenger cars. Today, many leading railroads are using this dependable Oakite system as standard procedure.

Above, you see the Oakite system in action. This sturdy washing unit was built to specifications from Oakite blueprints. Entire unit was fabricated in the railroad's own shops.

Today, you can cut your equipment-washing costs by specifying Oakite pressure-spray cleaning and rinsing systems and by selecting any one of a wide variety of specialized Oakite cleaning compounds.



One of the typical automatic cleaning methods available from Oakite.

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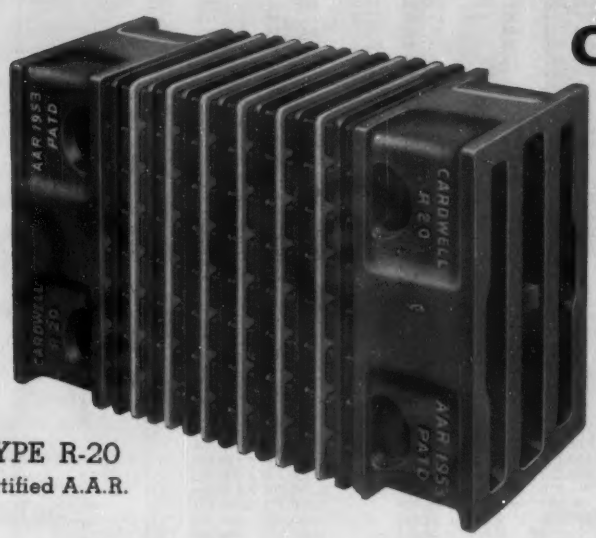
CARDWELL RUBBER DRAFT GEAR



TYPE R-20
Certified A.A.R.

PRE-COMPRESSED..EASILY INSTALLED..NO SPECIAL ATTACHMENTS

Fits standard 24⅝-inch pockets! Uses two standard 2¼-inch followers per gear. Without draft rigging changes of any kind, Cardwell R-20 Rubber Draft Gears are completely interchangeable.

The R-20 is self-contained, factory-assembled, pre-compressed for easy installation. It is symmetrical . . . either end may be applied toward the coupler butt.

Performance-wise, the R-20 surpassed by good margins A.A.R. tests for capacity, endurance and sturdiness under M-901A specifications. A companion gear, the R-18 Cardwell Rubber Gear for 18½-inch pockets, also is A.A.R. Certified!

Specify Cardwell Westinghouse Draft Gears . . . Friction or Rubber type. Send today for catalogs.

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Cardwell V-18 Friction Draft Gear
Westinghouse Friction Draft Gear
Cardwell M-25 Friction Draft Gear
Cardwell Friction Bolster Spring

Specify
CARDWELL
WESTINGHOUSE

Freight Operating Statistics of Large Railways—Selected Items

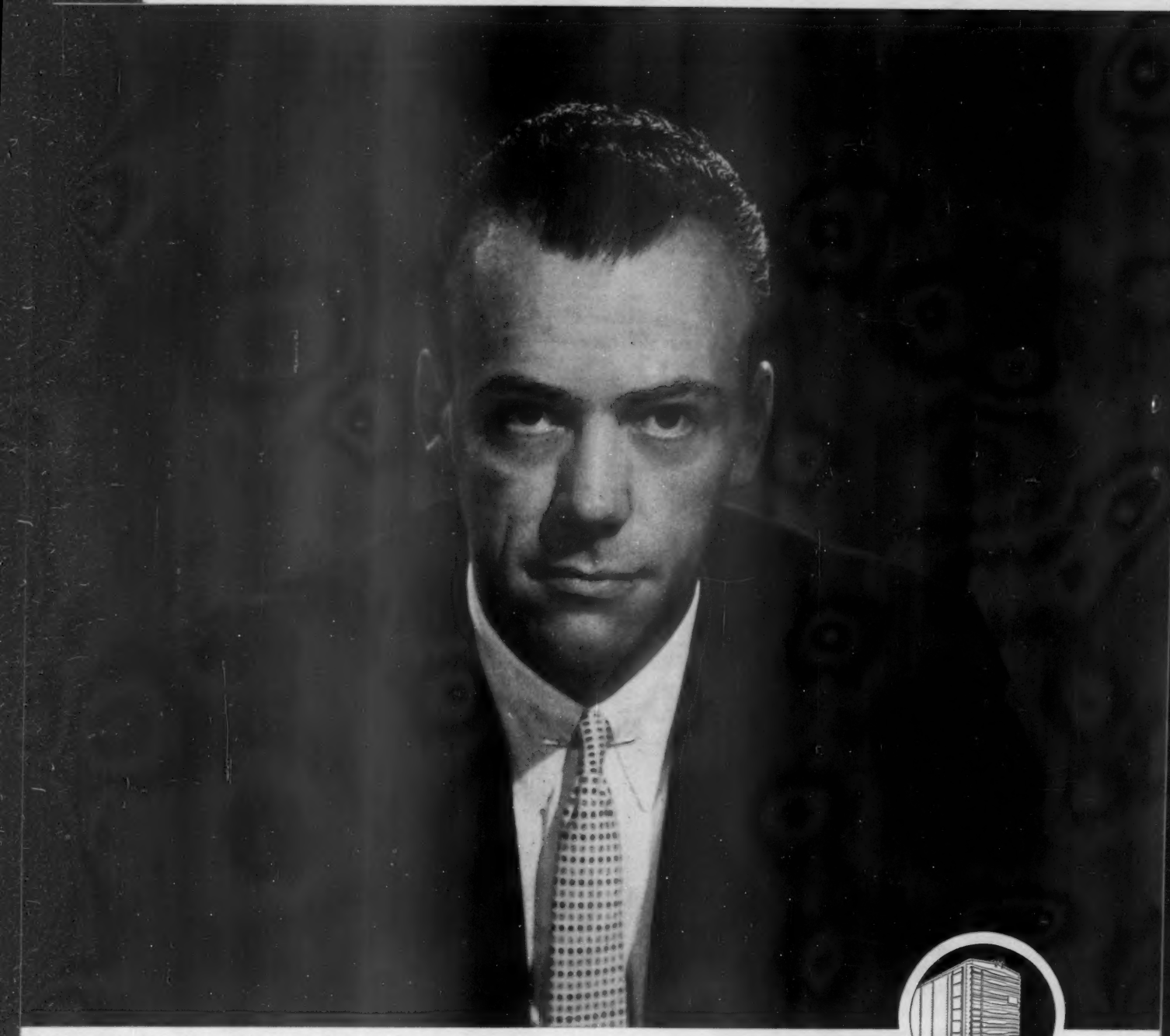
Region, Road and Year		Miles of road operated	Train miles	Locomotive Miles: Principal and helper	Locomotive Miles: Light	Car Miles: Loaded (thousands)	Car Miles: Per cent loaded	Ton-miles (thousands): Gross excl.locos. & tenders	Ton-miles (thousands): Net rev. and non-rev.	Road-locos.on lines: Serviceable: Unstored	Road-locos.on lines: Serviceable: Stored	Road-locos.on lines: B.O.	Road-locos.on lines: Per cent B.O.
New Eng. Region	Boston & Maine	1956	1,561	237,284	241,555	7,925	9,172	68.0	591,932	245,276	67	..	1	1.5
		1955	1,564	249,454	254,507	9,509	9,557	67.8	604,102	250,142	68	1	6	8.0
	N. Y., N. H. & Htfd	1956	1,746	254,727	254,737	22,617	11,235	68.6	698,879	286,930	84	..	11	11.6
		1955	1,746	274,810	275,594	23,454	11,309	68.1	684,755	275,177	104	..	10	8.8
Great Lakes Region	Delaware & Hudson	1956	771	180,764	185,741	6,210	9,913	71.5	682,980	364,072	40	..	4	9.1
		1955	792	177,717	181,925	5,384	9,223	71.5	621,200	328,557	39	..	4	9.3
	Del., Lack. & Western	1956	962	292,881	302,938	21,882	12,554	70.4	813,207	360,262	62	..	1	1.6
		1955	962	276,048	287,959	22,006	13,008	72.4	837,158	383,170	62	..	1	1.6
	Erie	1956	2,207	610,802	616,373	18,926	33,537	70.8	2,040,353	826,634	168	..	3	1.8
		1955	2,224	606,866	611,065	19,183	33,196	68.3	2,064,319	819,499	161	..	3	1.8
	Grand Trunk Western	1956	951	275,404	279,887	2,160	8,302	59.8	602,867	248,788	57	..	20	26.0
		1955	952	263,313	270,799	2,245	8,863	60.6	638,247	259,318	58	..	17	22.7
	Lehigh Valley	1956	1,135	229,545	232,929	7,878	10,992	65.6	775,715	366,954	33	..	2	5.7
		1955	1,138	214,598	216,541	6,988	10,414	68.9	712,171	342,625	35	..	..	--
	New York Central	1956	10,565	2,248,143	2,282,174	126,982	96,191	62.3	6,887,912	3,122,741	504	36	42	7.2
		1955	10,661	2,631,933	2,666,976	106,590	102,915	61.6	7,490,420	3,416,799	578	13	109	15.6
	New York, Chic. & St. L.	1956	2,154	726,430	752,036	8,357	31,210	65.7	2,208,527	997,036	168	1	20	9.6
		1955	2,154	748,184	771,708	7,200	31,585	67.4	2,188,889	1,017,636	184	3	22	10.5
	Pitts. & Lake Erie	1956	221	57,119	57,119	....	2,602	68.9	237,043	147,952	11	..	3	21.4
		1955	221	68,083	68,083	158	3,137	71.3	266,705	168,428	14	..	1	6.7
	Wabash	1956	2,381	498,649	500,405	6,059	22,085	66.4	1,475,120	600,342	110	..	1	.9
		1955	2,381	549,996	551,436	6,310	24,395	66.1	1,582,442	611,954	102	..	1	1.0
Central Eastern Region	Baltimore & Ohio	1956	5,910	1,653,691	1,854,486	177,156	67,315	62.9	5,390,014	2,715,472	477	6	78	13.9
		1955	6,072	1,660,107	1,834,379	172,159	65,676	65.7	5,200,172	2,575,028	451	5	98	17.7
	Bessemer & Lake Erie	1956	208	36,760	37,331	52	1,447	69.2	159,199	106,086	15	..	..	--
		1955	208	57,110	62,107	210	3,139	59.2	380,589	246,793	16	..	..	--
	Central RR Co. of New Jersey	1956	612	138,112	139,317	6,427	5,138	65.6	395,256	209,853	65	..	2	3.0
		1955	613	112,715	113,326	5,066	4,263	67.4	314,770	166,064	64	..	2	3.0
	Chicago & Eastern Ill.	1956	868	118,437	118,437	2,732	5,283	67.5	383,109	192,622	26	..	3	10.3
		1955	868	121,937	121,937	2,490	4,864	67.3	336,837	160,731	25	..	3	10.7
	Elgin, Joliet & Eastern	1956	236	79,157	79,551	....	2,430	64.2	195,582	106,040	32	6	2	5.0
		1955	236	84,658	84,905	....	2,675	65.4	214,773	117,862	37	1	3	7.3
	Pennsylvania System	1956	9,892	3,018,166	3,240,605	255,884	132,748	68.1	9,653,172	4,821,851	872	7	333	27.5
		1955	9,892	3,163,840	3,421,209	275,003	137,886	67.0	9,842,424	4,802,689	861	22	435	33.0
	Reading	1956	1,303	357,402	359,437	10,831	13,531	65.8	1,089,633	598,393	158	4	24	12.9
		1955	1,303	336,448	340,730	14,006	12,715	66.8	1,002,846	540,898	155	2	32	16.9
	Western Maryland	1956	846	172,530	178,896	9,798	6,968	63.4	589,339	335,334	41	..	..	..
		1955	846	172,957	179,964	10,436	7,146	64.7	602,495	346,155	36	..	..	..
Pocahontas Region	Chesapeake & Ohio	1956	5,067	1,627,892	1,654,115	50,177	73,271	57.5	6,522,956	3,710,884	512	9	91	14.9
		1955	5,046	1,571,447	1,606,468	50,004	68,879	57.5	6,028,378	3,402,445	395	8	109	21.3
	Norfolk & Western	1956	2,110	793,121	861,910	75,643	39,829	59.1	3,796,896	2,128,464	230	6	14	5.6
		1955	2,104	736,601	785,984	64,977	36,436	57.6	3,408,375	1,866,437	221	17	21	8.1
Southern Region	Atlantic Coast Line	1956	5,283	817,760	817,760	9,284	24,530	60.4	1,833,456	841,360	177	..	7	3.8
		1955	5,278	779,652	779,652	8,920	23,613	61.9	1,686,974	786,336	234	..	7	2.9
	Central of Georgia	1956	1,731	198,514	198,514	2,248	7,947	67.6	560,062	272,540	74	..	4	5.1
		1955	1,731	191,026	191,053	1,718	7,581	67.8	521,006	250,341	75	..	2	2.6
	Gulf, Mobile & Ohio	1956	2,717	276,156	276,156	152	15,280	70.2	1,029,212	492,845	83	..	8	8.8
		1955	2,717	269,533	269,533	91	15,301	72.8	1,003,571	492,870	86	..	5	5.5
	Illinois Central	1956	6,503	1,214,007	1,214,447	35,440	51,302	62.9	3,775,507	1,785,236	314	8	117	26.7
		1955	6,531	1,252,968	1,255,049	38,672	51,991	62.3	3,827,173	1,788,398	328	36	194	34.8
	Louisville & Nashville	1956	4,714	902,407	904,679	15,016	34,139	63.5	2,577,198	1,345,175	171	22	14	6.8
		1955	4,715	924,830	938,836	19,183	33,764	61.9	2,587,065	1,338,562	186	16	10	4.7
	Nash., Chatt. & St. Louis	1956	1,043	169,310	172,530	3,466	5,620	71.7	369,837	179,635	50	..	3	5.7
		1955	1,043	167,560	170,683	3,383	5,555	72.0	360,360	173,455	49	..	4	7.5
	Seaboard Air Line	1956	4,051	595,808	595,808	767	22,909	62.9	1,650,240	770,376	138	..	8	5.5
		1955	4,053	570,256	570,256	829	22,415	64.1	1,603,618	744,061	133	..	8	5.7
	Southern	1956	6,259	908,839	908,909	1g228	43,477	68.7	2,848,558	1,339,077	188	5	6	3.0
		1955	6,264	938,559	938,619	13,588	43,054	69.7	2,758,510	1,284,392	271	..	2	0.7
Northwestern Region	Chicago & North Western	1956	7,800	683,656	684,625	7,367	30,684	65.3	2,193,507	920,520	143	3	11	7.0
		1955	7,814	790,159	793,234	11,886	36,003	65.6	2,506,688	1,080,090	151	9	24	13.0
	Chicago Great Western	1956	1,437	140,330	140,330	193	8,218	71.8	549,407	266,489	31	..	1	3.1
		1955	1,437	140,602	140,602	212	8,520	67.8	583,186	269,390	30	..	3	9.1
	Chic., Milw., St. P. & Pac.	1956	10,633	1,101,979	1,121,162	20,006	48,858	63.0	3,386,443	1,481,008	291	2	11	3.6
		1955	10,633	1,092,249	1,109,297	20,601	46,519	64.3	3,249,895	1,469,828	282	43	19	5.5
	Chic., St. P., Minn. & Omaha	1956	1,606	159,518	159,518	2,802	5,701	67.8	395,558	180,196	43	..	1	2.3
		1955	1,606	172,145	173,615	4,698	6,211	70.8	428,949	197,825	58	..	12	17.1
	Duluth, Missabe & Iron Range	1956	569	93,998	94,379	627	3,940	54.2	387,625	240,405	72	4	10	11.6
		1955	569	186,667	187,751	1,661	8,469	51.5	908,805	552,767	63	..	6	8.7
	Great Northern	1956	8,274	1,289,829	1,295,338	43,585	51,982	66.4	3,978,374	2,018,240	269	38	17	5.2
		1955	8,270	1,268,740	1,276,179	44,126	52,489	65.1	4,005,720	2,021,080	268	61	30	8.4
	Minneap., St. P. & S. Ste. M.	1956	4,171	430,428	433,369	2,932	15,876	65.8	1,110,126	531,479	81	10	5	5.2
		1955	4,171	412,727	415,205	2,965	14,176	67.9	1,037,360	495,824	82	11	3	3.1
	Northern Pacific	1956	6,569	932,267	948,017	27,486	41,649	67.3	2,851,057	1,304,043	255	59	25	7.6
		1955	6,570	931,600	948,805	23,815	38,621	67.2	2,604,482	1,224,837	285	33	59	15.6
Central Western Region	Atch., Top. & S. Fe (incl. G. C. & S. F. and P. & S. F.)	1956	13,124	2,394,448	2,492,063	45,851	109,234	65.0	7,439,631	2,900,140	555	48	56	8.5
		1955	13,098	2,468,549	2,570,074	70,127	110,239	65.6	7,397,157	2,878,460	513	77	40	6.3
	Chic., Burl. & Quincy	1956	8,771	1,172,775	1,169,116	25,355	53,580	67.6	3,511,596	1,522,901	211	39	31	11.0
		1955	8,773	1,210,229	1,205,490	31,517	50,826	65.9	3,437,799	1,500,241	198	37	32	12.0
	Chic., Rock I. & Pac.	1956	7,580	947,874	944,584	1,064	37,355	65.4	2,635,266	1,162,389	167	..	7	4.0
		1955	7,904	887,930	882,527	909	34,696	63.1	2,502,973	1,082,170	166	3	6	3.4
	Denver & R. G. Wn.	1956	2,155	334,581	359,346	41,222	17,385	73.2	1,147,564	536,818	86	12	4	3.9
		1955	2,165	337,949	363,571	37,521	16,906	71.3	1,140,202	536,146	65	25	25	21.7
	Southern Pacific	1956	8,044	2,321,280	2,420,370	163,887	107,649	63.3	7,453,589	2,953,090	706	44	86	10.3
		1955	8,068	2,602,630	2,724,899	257,764	115,512	63.8	7,932,730	3,132,222	716	9	99	12.0
	Union Pacific	1956	9,797	2,578,472	2,643,580	107,216	116,972	62.5	7,950,285	3,141,608	434	21	102	18.3
		1955	9,813	2,790,294	2,858,454	145,546	126,271	64.2	8,450,554	3,387,362	492	74	102	15.3
	Western Pacific	1956	1,190	257,179	273,120	10,693	11,914	71.2	751,310	329,115	47	..	..	..
		1955	1,190	269,442	279,445	10,779	12,298	72.9	757,211	331,245	43	..	..	..
Southwestern Region	Kansas City Southern	1956	886	142,642	142,644	183	8,770	69.7	616,907	286,056	25	..	1	3.8
		1955	886	150,611	150,611	88	8,833	69.0	621,623	284,778	26	..	2	7.1
	Louisiana & Arkansas	1956	746	102,524	102,524	465	4,555	63.9	358,359	169,803	16	..	..	..
		1955	753	101,224	101,224	263	4,472	64.6	346,108	162,913	18	..	..	..
	Mo.-Kans.-Texas Lines	1956	3,230	332,818	332,818	3,459	14,101	65.7	918,244	396,382	86	..	..	..
		1955	3,230	348,559	348,559	3,613	14,698	65.1	978,120	427,801	88	..	..	..
	Missouri Pacific	1956	9,701	178,593	178,593	10,535	53,844	65.1	3,722,193	1,674,948	347	..	44	11.3
		1955	9,702	315,313	315,313	11,302	56,118	66.2	3,867,907	1,756,620	326	56	38	9.0
	Texas & Pacific	1956	1,822	262,753	262,753	2,938	13,824	66.2	960,074	385,720	62	..	1	1.6
		1955	1,822	318,664	318,664	3,109	14,191	65.2	996,817	394,453	58	..	2	3.3
	St. Louis-San Francisco	1956	4,573	659,058	659,058	6,233	25,946	67.2	1,759,929	794,264	107	..	4	3.6
		1955	4,573	600,459	600,459	5,730	24,208	66.1	1,613,553	715,254	116	..	7	5.7
	St. Louis Southw. Lines	1956	1,554	322,351	322,381	1,503	14,641	73.1	907,569	405,696	52	..	1	1.9
		1955	1,554	318,701	318,701	1,535	15,137	73.2	931,046	416,191	55	1	11	16.4
	Texas & New Orleans	1956	4,287	680,409	680,409	299	28,641	64.4	1,997,388	875,158	152	..	4	2.6
		1955	4,302	723,169	723,169	3,630	29,014	65.5	1,995,504	875,581	138	..	2	1.4

For the month of August 1956 Compared with August 1955

Region, Road and Year		Freight cars on line				G.t.m.per train-hr. excl.locos and tenders	G.t.m. per train-mi. excl.locos and tenders	Net ton-mi. per train-mile	Net ton-mi. per l'd car-mile	Net ton-mi. per car-day	Car-miles per car-day	Net daily ton-mi. per road-mi.	Train-miles per train-hour	Miles per loco. per day
		Home	Foreign	Total	Per Cent B.O.									
New Eng. Region	Boston & Maine 1956	1,590	8,213	9,803	3.1	36,952	2,504	1,037	26.7	790	43.5	5,069	14.8	135.7
	1955	2,031	9,998	12,029	4.2	34,966	2,427	1,005	26.2	671	37.8	5,159	14.4	130.6
	N. Y., N. H. & Htfd 1956	2,190	14,340	16,530	3.1	39,241	2,744	1,126	25.5	568	32.4	5,301	14.3	126.9
	1955	1,905	21,287	23,192	1.7	37,203	2,492	1,001	24.3	388	23.4	5,084	14.9	112.9
Great Lakes Region	Delaware & Hudson 1956	1,802	6,868	8,670	7.1	60,769	3,799	2,025	36.7	1,304	49.7	15,233	16.1	157.9
	1955	2,248	5,545	7,793	4.7	59,286	3,512	1,857	35.6	1,265	49.7	13,382	17.0	156.0
	Del., Lack. & Western 1956	3,814	11,951	15,765	3.0	47,743	2,827	1,253	28.7	782	38.7	12,080	17.2	185.8
	1955	4,347	12,991	17,338	2.8	48,273	3,098	1,418	29.5	754	35.3	12,849	15.9	176.4
	Erie 1956	5,488	18,608	24,096	2.6	65,042	3,378	1,369	24.7	1,114	63.9	12,085	19.5	133.2
	1955	7,523	19,611	27,134	3.5	61,189	3,431	1,362	24.7	990	58.7	11,886	18.0	138.8
	Grand Trunk Western 1956	4,393	8,245	12,638	7.3	46,615	2,210	912	30.0	613	34.2	8,439	21.3	131.9
	1955	3,744	10,615	14,359	10.9	50,248	2,438	990	29.3	593	33.5	8,787	20.7	129.3
	Lehigh Valley 1956	5,162	8,824	13,986	4.1	67,272	3,429	1,622	33.4	861	39.3	10,429	19.9	240.2
	1955	7,611	9,447	17,058	1.8	62,063	3,398	1,635	32.9	658	29.0	9,712	18.7	220.4
	New York Central 1956	56,477	92,335	148,812	2.7	49,573	3,123	1,416	32.5	720	35.6	9,535	16.2	147.7
	1955	52,359	102,782	155,141	4.8	49,445	2,884	1,316	33.2	727	35.6	10,359	17.4	144.7
	New York, Chic. & St. L. 1956	7,193	19,670	26,863	5.7	51,266	3,118	1,407	31.9	1,315	62.6	14,932	16.9	131.5
	1955	6,470	18,545	25,015	7.1	50,324	3,008	1,399	32.2	1,346	62.0	15,240	17.2	132.7
	Pitts. & Lake Erie 1956	5,887	5,985	11,862	6.4	62,102	4,188	2,614	56.9	498	12.7	21,596	15.0	143.8
	1955	2,726	10,003	12,729	3.8	62,300	3,941	2,489	53.7	435	11.4	24,584	15.9	133.7
	Wabash 1956	8,809	10,452	19,261	5.1	64,194	2,971	1,209	27.2	994	55.1	8,134	21.7	154.9
	1955	8,796	10,566	19,362	6.9	61,053	2,888	1,117	25.1	1,034	62.4	8,291	21.2	185.9
Central Eastern Region	Baltimore & Ohio 1956	47,875	56,053	103,928	6.1	50,108	3,328	1,676	40.3	874	34.4	14,822	15.4	124.4
	1955	40,317	47,242	87,559	10.9	47,230	3,188	1,579	39.2	919	35.7	13,680	15.1	123.2
	Bessemer & Lake Erie 1956	4,515	1,079	5,594	6.1	71,008	4,526	3,016	73.3	536	10.6	16,453	16.4	90.1
	1955	3,253	1,381	4,634	17.3	100,378	6,819	4,422	78.6	1,685	36.2	38,274	15.1	142.0
	Central RR Co. of New Jersey 1956	2,625	10,414	13,039	8.0	40,046	2,992	1,589	40.8	517	19.3	11,061	14.0	99.0
	1955	2,662	10,235	12,897	6.5	38,261	2,919	1,540	39.0	420	16.0	8,739	13.7	80.3
	Chicago & Eastern Ill. 1956	2,492	3,056	5,548	8.3	53,276	3,252	1,635	36.5	1,048	42.6	7,159	16.5	143.8
	1955	2,746	3,043	5,789	8.6	44,864	2,777	1,325	33.0	981	44.1	5,973	16.2	153.7
	Elgin, Joliet & Eastern 1956	6,478	8,302	14,780	5.3	19,968	2,573	1,395	43.6	232	8.3	14,494	8.1	85.1
	1955	7,048	8,999	16,047	5.0	20,262	2,631	1,444	44.1	232	8.1	16,110	8.0	88.2
	Pennsylvania System 1956	96,123	97,838	193,961	7.1	54,327	3,289	1,643	36.3	806	32.6	15,724	17.0	102.7
	1955	99,977	96,897	196,874	10.0	51,785	3,210	1,566	34.8	785	33.6	15,662	16.6	99.3
	Reading 1956	10,217	22,172	32,389	3.7	48,319	3,049	1,674	44.2	605	20.8	14,814	15.8	77.4
	1955	11,581	18,409	29,990	5.2	45,790	2,982	1,608	42.5	611	21.5	13,391	15.4	71.1
	Western Maryland 1956	3,163	4,797	7,960	3.9	48,900	3,472	1,976	48.1	1,172	38.4	12,786	14.3	160.3
	1955	3,718	6,056	9,774	4.3	48,686	3,525	2,025	48.4	1,206	38.5	13,199	14.0	183.0
Pocahontas Region	Chesapeake & Ohio 1956	48,998	33,638	82,636	0.9	74,423	4,034	2,295	50.6	1,433	49.2	23,625	18.6	96.2
	1955	46,356	36,766	83,122	2.2	70,722	3,863	2,180	49.4	1,312	46.2	21,751	18.4	104.3
	Norfolk & Western 1956	33,024	10,543	43,567	0.7	81,191	4,928	2,763	53.4	1,505	47.6	32,540	17.0	132.0
	1955	29,466	9,581	39,047	1.6	78,576	4,750	2,601	51.2	1,542	52.2	28,616	17.0	113.3
Southern Region	Atlantic Coast Line 1956	17,413	17,552	34,965	4.6	43,664	2,250	1,032	34.3	780	37.7	5,137	19.5	155.6
	1955	18,142	14,659	32,801	4.5	40,851	2,174	1,013	33.3	777	37.6	4,866	18.9	115.9
	Central of Georgia 1956	2,403	6,992	9,395	2.8	47,930	2,828	1,376	34.3	959	41.4	5,079	17.0	92.3
	1955	2,774	6,896	9,670	3.2	46,942	2,742	1,318	33.0	855	38.2	4,665	17.2	89.4
	Gulf, Mobile & Ohio 1956	4,785	10,692	15,477	6.0	69,368	3,730	1,786	32.3	1,059	46.8	5,851	18.6	107.3
	1955	4,756	9,571	14,327	3.2	70,239	3,727	1,830	32.2	1,098	46.8	5,852	18.9	104.3
	Illinois Central 1956	22,774	25,778	48,552	2.1	52,785	3,150	1,490	34.8	1,172	53.5	8,856	17.0	99.4
	1955	22,772	28,284	51,056	2.5	50,279	3,090	1,444	34.4	1,128	52.6	8,833	16.5	81.1
	Louisville & Nashville 1956	24,966	14,735	39,701	3.6	49,642	2,863	1,495	39.4	1,087	43.5	9,205	17.4	156.4
	1955	25,262	14,466	39,728	6.9	46,684	2,805	1,451	39.6	1,118	45.5	9,158	16.7	154.1
	Nash., Chatt. & St. Louis 1956	3,235	4,197	7,432	4.6	41,489	2,188	1,063	32.0	803	35.0	5,556	19.0	119.2
	1955	3,548	3,717	7,265	4.9	39,358	2,152	1,036	31.2	758	33.8	5,365	18.3	117.5
	Seaboard Air Line 1956	11,432	15,591	27,023	2.3	49,329	2,814	1,314	33.6	939	44.4	6,134	17.8	156.2
	1955	11,576	14,021	25,597	3.1	51,285	2,846	1,321	33.2	954	44.8	5,922	18.2	151.7
	Southern 1956	15,917	24,356	40,273	3.9	52,620	3,147	1,479	30.8	1,089	51.5	6,901	16.8	156.5
	1955	15,739	24,978	40,717	3.7	49,812	2,949	1,373	29.8	1,003	48.3	6,614	16.9	123.9
Northwestern Region	Chicago & North Western 1956	17,712	30,607	48,319	4.2	52,710	3,262	1,369	30.0	612	31.2	3,807	16.4	159.9
	1955	16,489	33,117	49,606	5.5	55,040	3,233	1,393	30.0	720	36.6	4,459	17.3	151.4
	Chicago Great Western 1956	1,537	4,419	5,956	2.9	73,647	3,919	1,901	32.4	1,450	62.2	5,982	18.8	148.3
	1955	1,418	4,468	5,886	3.3	76,735	4,156	1,920	31.6	1,417	66.1	6,047	18.5	143.5
	Chic., Milw., St. P. & Pac. 1956	30,006	38,002	68,008	6.9	57,240	3,085	1,349	30.3	739	38.7	4,493	18.6	132.8
	1955	29,087	34,381	63,468	6.0	55,334	2,985	1,350	31.6	760	37.4	4,459	18.6	118.2
	Chic., St. P., Minn. & Omaha 1956	1,073	8,406	9,479	1.7	32,256	2,530	1,152	31.6	629	29.4	3,619	13.0	134.1
	1955	1,178	8,976	10,154	2.5	34,253	2,538	1,171	31.9	651	28.9	3,973	13.7	88.7
	Duluth, Missabe & Iron Range 1956	12,901	1,022	13,923	2.8	67,707	4,503	2,793	61.0	539	16.3	13,629	16.4	44.4
	1955	13,134	899	14,033	2.2	84,032	5,217	3,173	65.3	1,265	37.6	31,338	17.3	105.1
	Great Northern 1956	24,662	26,229	50,891	2.6	55,300	3,146	1,596	38.8	1,327	52.3	7,869	17.9	137.9
	1955	21,493	25,866	47,359	2.6	55,652	3,213	1,621	38.5	1,451	57.9	7,883	17.6	123.0
	Minneap., St. P. & S. Ste. M. 1956	6,435	9,817	16,252	4.7	51,193	2,596	1,243	33.5	1,046	47.5	4,110	19.8	162.3
	1955	6,458	9,631	16,089	5.9	50,660	2,534	1,211	35.0	1,037	43.7	3,835	20.2	152.8
	Northern Pacific 1956	18,546	19,636	38,182	5.1	57,482	3,071	1,405	31.3	1,054	50.0	6,404	18.8	101.2
	1955	18,345	22,498	40,843	6.5	52,328	2,803	1,318	31.7	1,025	48.1	6,014	18.7	90.6
Central Western Region	Atch., Top. & S. Fe (incl. G. C. & S. F. and P. & S. F.) 1956	55,322	32,756	88,078	3.9	70,805	3,117	1,215	26.5	1,033	59.8	7,128	22.8	132.3
	1955	54,189	31,148	85,337	3.6	67,563	3,013	1,172	26.1	1,047	61.1	7,089	22.5	143.5
	Chic., Burl. & Quincy 1956	20,567	25,146	45,713	3.5	61,032	3,000	1,301	28.4	1,087	56.5	5,601	20.4	146.8
	1955	20,996	24,112	45,108	3.3	56,454	2,846	1,242	29.5	1,081	55.6	5,516	19.9	155.0
	Chic., Rock I. & Pac. 1956	11,432	22,137	33,569	5.4	55,739	2,788	1,230	31.1	1,120	55.0	4,947	20.0	182.5
	1955	11,265	20,717	31,982	5.8	54,357	2,828	1,223	31.2	1,053	53.5	4,417	19.3	172.0
	Denver & R. G. Wn. 1956	6,701	9,207	15,908	3.5	65,971	3,439	1,609	30.9	1,131	50.1	8,036	19.2	134.6
	1955	7,561	9,837	17,398	3.0	62,323	3,381	1,590	31.7	1,026	45.4	7,988	18.5	119.4
	Southern Pacific 1956	28,345	48,896	77,241	1.8	59,122	3,250	1,288	27.4	1,205	69.4	11,842	18.4	110.0
	1955	29,356	51,418	80,774	1.5	55,488	3,086	1,219	27.1	1,256	72.6	12,523	18.2	128.3
	Union Pacific 1956	30,849	35,653	66,502	2.2	78,497	3,110	1,229	26.9	1,449	86.3	10,344	25.5	162.0
	1955	29,513	35,915	65,428	2.5	78,361	3,051	1,223	26.8	1,661	98.5	11,135	25.9	148.5
	Western Pacific 1956	2,132	4,736	6,868	1.8	72,436	2,934	1,285	27.6	1,627	82.8	8,922	24.8	197.4
	1955	2,059	3,866	5,925	2.4	69,482	2,831	1,239	26.9	1,863	94.9	8,979	24.7	231.6
Southwestern Region	Kansas City Southern 1956	1,555	6,491	8,046	3.2	85,610	4,330	2,008	32.6	1,181	51.9	10,415	19.8	209.5
	1955	1,147	6,520	7,667	2.5	87,491	4,134	1,894	32.2	1,194	53.7	10,368	21.2	204.7
	Louisiana & Arkansas 1956	1,645	3,416	5,061	6.5	68,415	3,499	1,658	37.3	1,085	45.6	7,343	19.6	253.8
	1955	1,164	3,216	4,380	4.3	66,816	3,424	1,612	36.4	1,209	51.3	6,979	19.5	237.3
	Mo.-Kans.-Texas Lines 1956	3,542	6,642	10,184	7.5	57,538	2,765	1,193	28.1	1,267	68.6	3,959	20.9	133.4
	1955	4,031	7,492	11,523	8.3	54,920	2,811	1,230	29.1	1,159	61.2	4,272	19.6	139.4
	Missouri Pacific 1956	19,600	31,418	51,018	4.5	62,081	3,171	1,427	31.1	1,033	51.0	5,570	19.7	106.0
	1955	22,742	27,503	50,245	2.9	63,067	2,964	1,346	31.3	1,105	53.3	5,841	21.4	107.9
	Texas & Pacific 1956	2,662	6,216	8,878	2.7	76,683	3,662	1,471	27.9	1,391	75.3	6,829	21.0	150.2
	1955	2,732	6,213	8,945	3.0	71,962	3,134	1,240	27.8	1,397	77.1	6,984	23.0	179.7
	St. Louis-San Francisco 1956	10,828	13,560	24,388	3.1	53,727	2,681	1,210	30.6	1,045	50.8	5,603	20.1	218.7
	1955	10,318	12,451	22,769	3.9	53,422	2,691	1,193	29.5	1,014	51.9	5,045	19.9	168.4
	St. Louis Southw. Lines 1956	1,815	5,185	7,000	1.3	55,465	2,819	1,260	27.7	2,001	98.8	8,421	19.7	208.0
	1955	1,810	4,492	6,302	1.6	7,479	2,925	1,308	27.5	2,078	103.3	8,639	19.7	163.3
	Texas & New Orleans 1956	5,163	16,376	21,539	1.6	59,372	2,953	1,294	30.6	1,262	64.1	6,585	20.2	153.6
	1955	5,420	18,196	23,616	1.9	55,764	2,776	1,218	30.2	1,240	62.7	6,565	20.2	180.0

Compiled by the Bureau of Transport Economics and Statistics, Interstate Commerce Commission. Subject to revision.

a RAILWAY AGE Workbook Page



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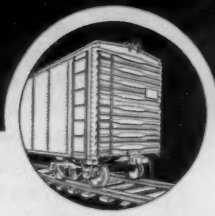

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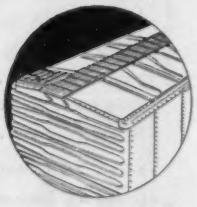

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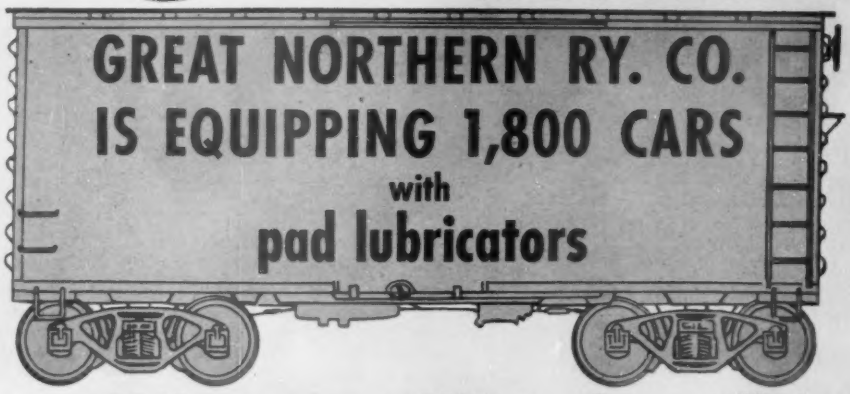

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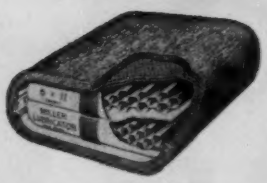

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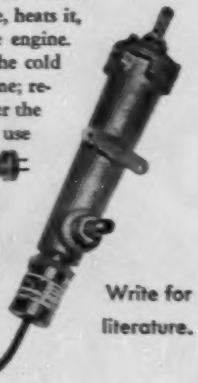

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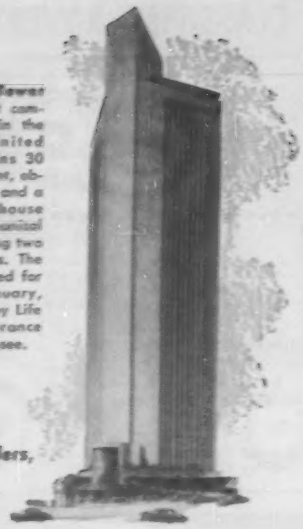

Life and Casualty Tower will be the tallest commercial structure in the southeastern United States. It contains 30 floors plus basement, observation platform and a three-story penthouse containing the mechanical equipment—including two VP package boilers. The building is scheduled for occupancy in January, 1957. It is owned by Life and Casualty Insurance Company of Tennessee.

. . . anywhere the floor-loading's adequate, of course. In Nashville's nearly-finished Life and Casualty Tower, two Combustion Engineering Package Boilers, Type VP, were installed in a 32nd-floor penthouse — nearly 400 feet above the street. The pictures show how the job was done.

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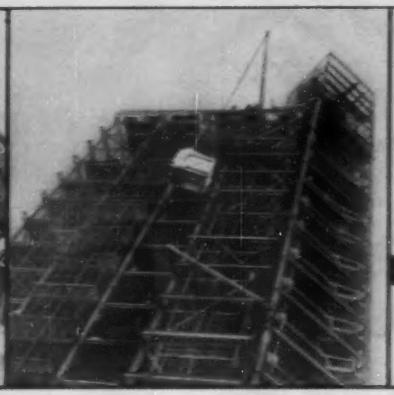
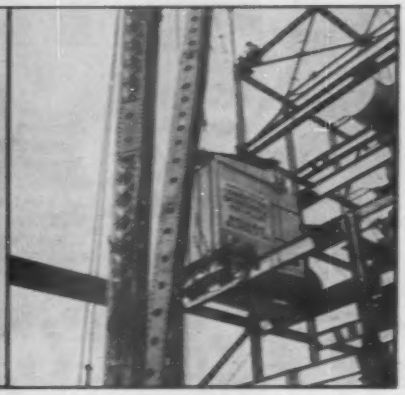


Almost Home—This VP has probably shattered the altitude record for boilers now—and it has another 30 or 40 feet yet to go. That's one of the advantages of the VP. You pick the spot and the rigging boys will find a way to move it in.



Boiler in a Penthouse—Now it's almost settled in its permanent skytop home; about set to bring up number 2. When the floor is ready, they'll hook up fuel, water and the job's done. They'll burn gas in these boilers, with oil as stand-by.

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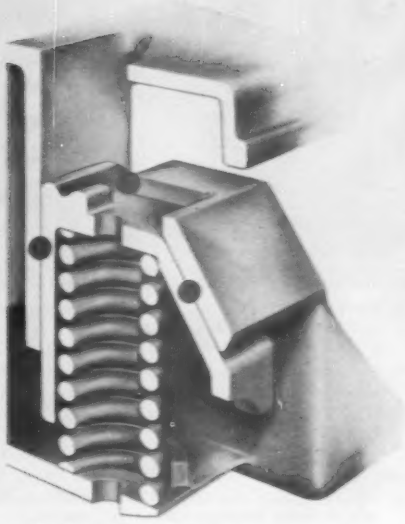

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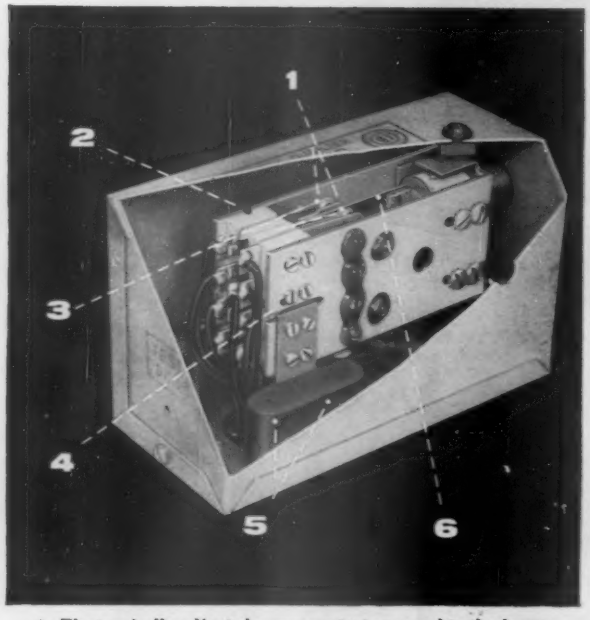

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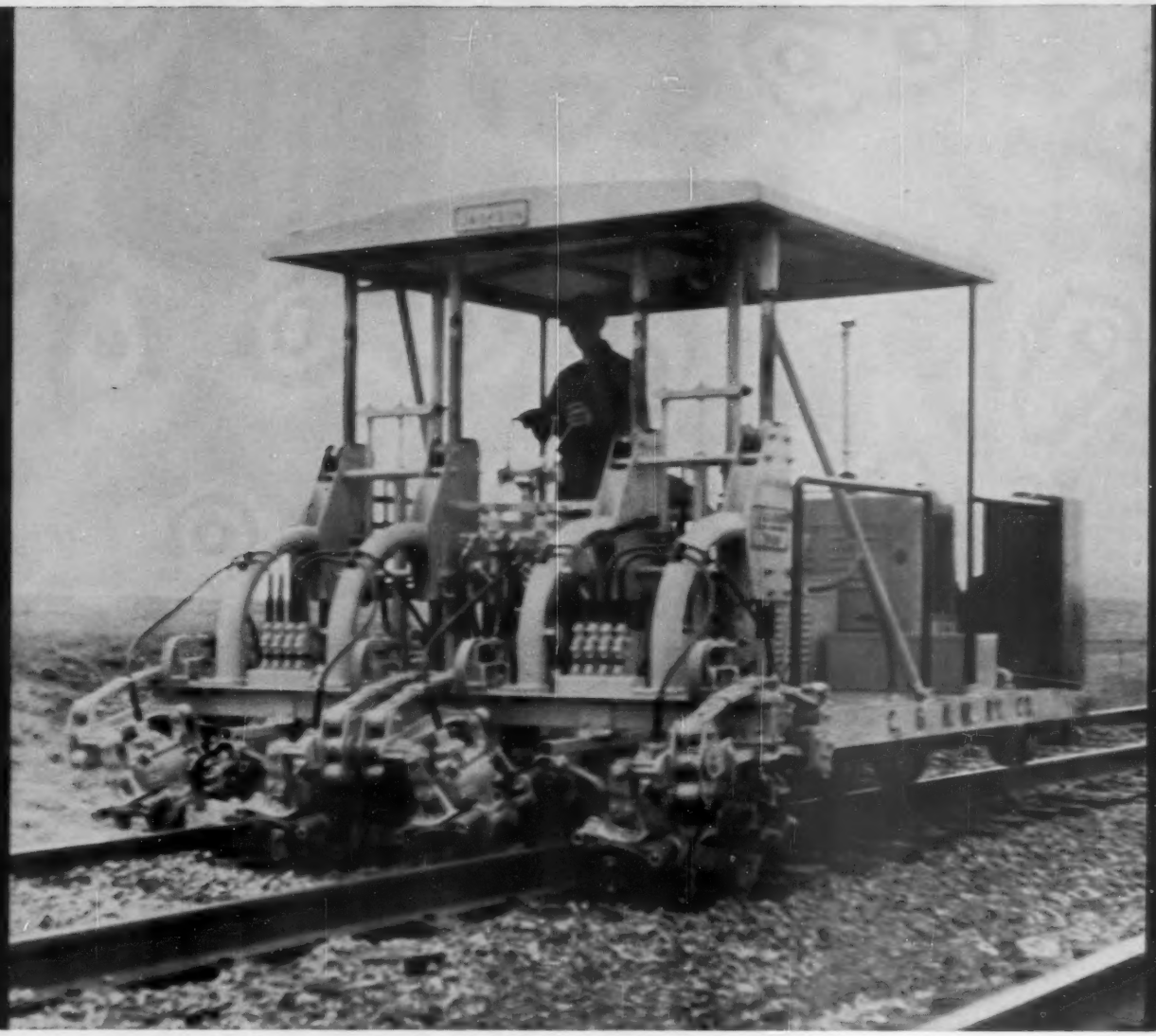

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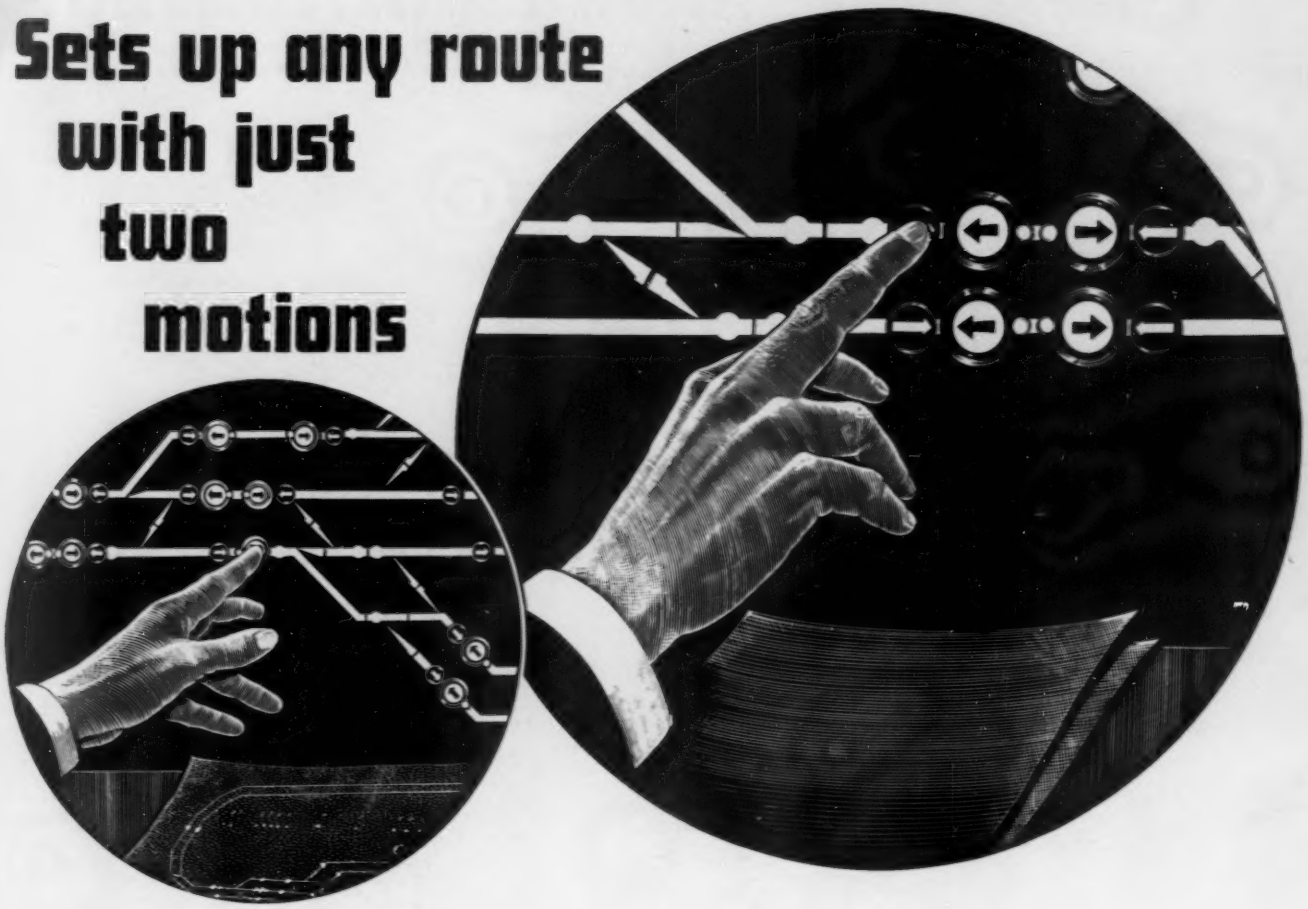

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